STREAMLINING THE PROJECT PROGRAMMING PROCESS

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Introduction

The South Carolina Department of Transportation oversees the management of hundreds of highway, research, and training projects each federal fiscal year. These projects are initiated across several different departments within the agency depending on funding source, complexity of design, and regional significance. This makes it difficult to accurately and consistently report on project information because there is no single, reliable source to house this data. The need to be able to provide information regarding project type, location, funding sources, projected letting date and cash payouts is essential to ensuring the Department is effectively managing the limited resources it has been entrusted with by the state tax payers and federal government.

Since projects are planned and programmed across multiple offices, it is also difficult to determine when projects overlap. This occurs most often with the agency's Pavement & Preservation program. These are short duration resurfacing projects that require little plan development and therefore could potentially cross a planned highway widening or safety project. For instance, surveys were completed for a major widening project on a primary route which later is resurfaced adding a two foot shoulder to the existing lane. Since the footprint of the roadway was changed, additional surveys are required to accurately reflect the changes in the widening plans. This is inefficient and wasteful. By increasing the communication and coordination efforts across all departments responsible for managing projects, this could potentially be avoided. This CPM Project submittal revolves around the development and implementation of a new Project Programming System (P2S) within the South Carolina Department of Transportation. Specifically, the initial assessment of how the implementation was handled and whether the system is alleviating the issues the Department identified with its evaluation of the current project programming process.

Association & Agency Benefit

South Carolina Code of Law Section 57-1-30[1] states that "The goal of the department is to provide adequate, safe, and efficient transportation services for the movement of people and goods." In striving to meet this mission the SCDOT recently adopted a new Strategic Management Plan that identifies six critical management areas including Workforce, Customer Service, Partnerships, Planning, Stewardship, and Transportation Systems & Infrastructure. This project will directly impact several of the goals outlined within four of these areas.[2] These include:

> *CMA: Customer Service (Goal 2) Provide consistent, professional and timely service to all customers.*
>
> *CMA: Planning (Goal 2) Optimize time to deliver engineering projects to contract letting.*
>
> *CMA: Stewardship (Goal 1) Optimize the management of financial operations.*
>
> *CMA: Stewardship (Goal 2) Optimize the management of all SCDOT financial resources.*
>
> *CMA: Transportation Systems & Infrastructure (Goal 3) Ensure that federal resources expended on preconstruction and other transportation infrastructure activities are for projects that are highly likely to be taken to completion.*

According to a recent report, "The SCDOT Construction Cost Index grew 91% between January 1, 2000 and December 31, 2011, while state motor fuel revenues grew only 16% during that

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[1] South Carolina Code of Laws 1976 (Supplement), Section 57-1-30
[2] South Carolina Department of Transportation, 2014 Strategic Management Plan pgs. 9-18

same time period..."[3] This means that safeguarding against the duplicity of projects should remain a top priority for the agency.

Background Information

In 2009 a task force was formed to evaluate the current programming process. The objectives of this evaluation were identified as:

- To prevent possible duplication and overlap of projects
- To establish consistent processes and mechanisms for project planning, initiation and tracking.
- To establish a definitive source for accurate project information.
- To provide the capability to distribute and disseminate project information in a clear, concise manner.

Over the course of the next year, interviews were conducted with all responsible parties involved in the project planning and programming process. The study reported three major findings[4]:

1. There was no single source for project planning and programming of highway transportation projects. Projects are planned in several offices using various tracking methods making it difficult for all participants to find planned or recently completed work.

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[3] South Carolina Department of Transportation Commission, Transportation Infrastructure Task Force, pg. 3

[4] South Carolina Department of Transportation, Project Programming Report: Findings & Recommendations, pg. 10-12

2. There was no consistent or automatic notification of project overlap or redundancy. The legacy programming software did not have the capability to capture or validate all route information for a project and therefore could not detect overlapping projects.
3. It was difficult to report project information consistently across all departments due to the fact that the programming process was lengthy and project identifiers were inconsistent between different offices.

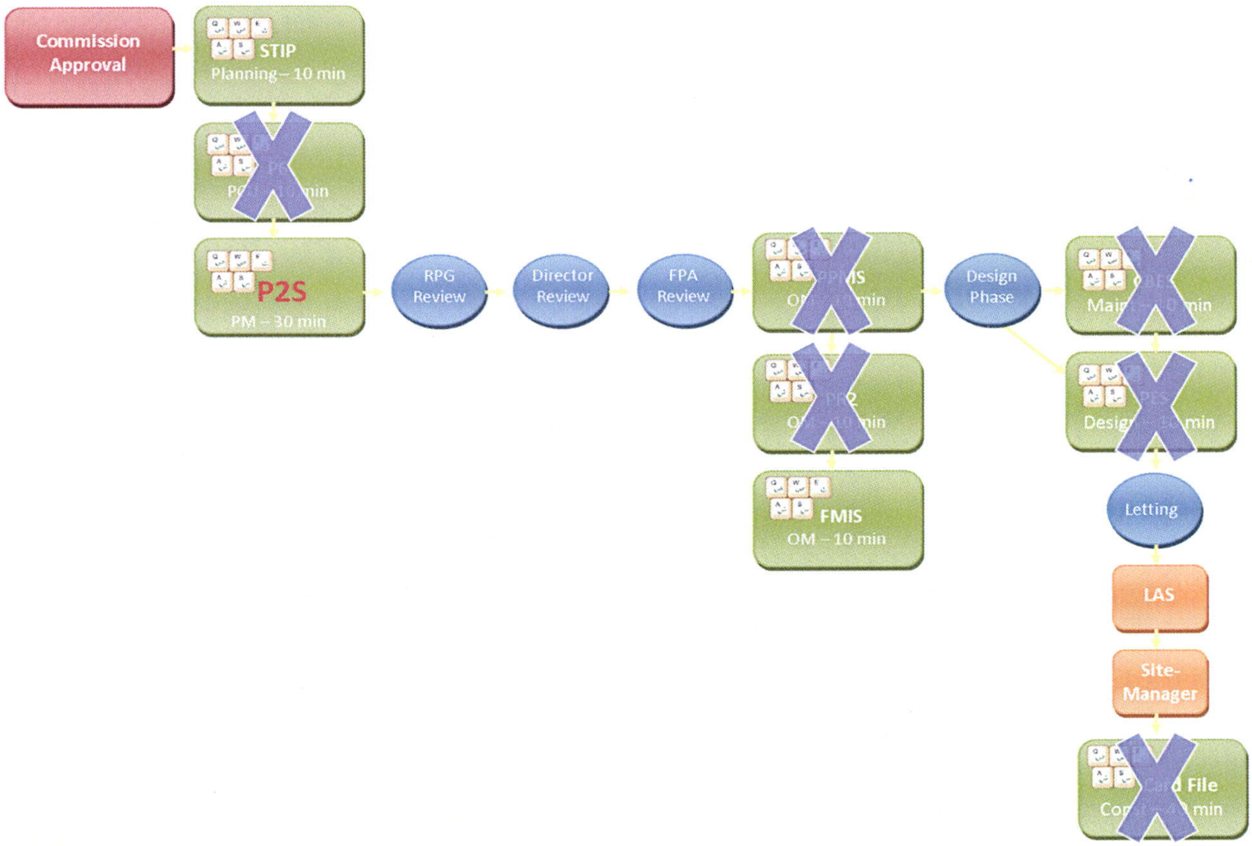
Based on the findings, the task force recommended that a new software solution be developed to address the Agency's needs. After receiving approval to move forward with the design of a new software system, a detailed Design Document was agreed upon by SCDOT and the developer. A copy of this document is provided in Appendix A. It is important to note here that the final design document is a living document in that the Department is continuously making modifications and enhancements to this application to increase efficiency and ease of use. The initial development of the application was completed, and on October 4, 2013, the new Project Programming System (P2S) was implemented throughout the entire Agency.

Project Programming System Benefits

To address issue #1 above, the application was developed to allow users to plan projects in a single location. Previously, projects did not get programmed into a system until funding was identified and preliminary engineering was about to begin. Now, users can plan projects and input key items like Estimated Start, Project Type, Location, and Current Cost Estimate. When users are searching the system, they can now see all projects being planned in another area and make informative decisions based on the information found.

In attempting to address issue #2 above, the new Project Programming System was to allow Program Managers or those responsible for overseeing the financial and schedule health of the project, to input all locations being worked on and to notify users when projects in development and/or construction overlapped. With this in mind, the system was built to integrate with the existing Roadway Information Management System (RIMS). This integration allows users to validate routes within the existing road network and detect when multiple projects are on-going within the same county, route, and mile points.

Also, in the evaluation it was discovered that the same project information was already being entered multiple times by multiple groups into multiple systems. In fact, the group responsible for maintaining the data in the legacy project system (PPMS) had no direct responsibility for the projects at all. Program Managers were required to fill out a Program Action Request PDF form to program and make any modifications to a project. This form was adopted in 2010 and allowed for electronic submittal for the first time. PARs were routed through email to appropriate supervisors for approval and then to the Obligations Management office for input into PPMS. The PAR Procedures Document found in Appendix B was fifteen pages long and had step by step instructions for the input and processing of a one page form. It was difficult for Program Managers to get everything needed in a clear and concise form to ensure the programming was set up correctly. Also, the Obligations Management office was then taking the same data and entering it into PPMS and another form for authorization and submittal to the Accounting Department. It was decided to create P2S so that the Program Managers could plan and program their own projects. This meant that the information only needed to be entered once, by the person responsible for the project and the data could then be passed to other systems, reducing the error rate within the data itself. All of the approval processes are now handled electronically by submitting an email to the appropriate approver with a link directly to the project in P2S. This improvement eliminated the need to enter all or partial information in four different systems as seen in the below flow chart.



The implementation of this new system has allowed the Department to discontinue use of the legacy project system (PPMS) which was housed on the CIO mainframe system at an average cost per year of $408,000 as well as the Director of Construction's CardFile application that was housed on the Agency's internal SQL server. The elimination of both of these applications should bring a cost savings to the Agency as well as reduce the number of applications our IT staff must maintain.

Lastly, to address issue #3 above, the Department had problems when it came to reporting on project information because there was no single project identifier used across all software platforms that could join the data together. Multiple identifiers existed such as Project Control Number, Federal Aid Project Number, and File Number. During the implementation of the new application, it was decided to combine these where possible. Upon project creation, a project identifier (Project ID) is systematically provided and remains with the project throughout its entire life cycle. This Project ID is transmitted along with all pertinent project data and pay items into the WebTrnsport system used for advertisement and letting of the contract to contractors. Once a contract is awarded, the information housed in WebTrnsport is then exported to another application called SiteManager. This software is used for the management of the contract during construction. Since the majority of the project data is now transmitted electronically through the process, P2S is free to report on data housed in both of these applications back to its users with little to no issues regarding linking of data.

Another added benefit of the P2S application is that it is deployed as a web application that utilizes the network user logins to maintain security access, meaning that all users within the Agency who have Intranet access can use the new application to search for information without having to have another login and password combination. All project and contract information stored within the system is available in read-only format for reporting purposes. This feature is an essential benefit to the Department in that all users looking for project information have a definitive and trusted source that they can access at any time.

Evaluation of the Implementation

To evaluate the current implementation of the new Project Programming System (P2S), a survey was sent out to all agency employees with Intranet access to ascertain the level of credibility with the data, the ease of use of the system, and any other information that may have been overlooked in the initial rollout. Since the Agency has only been using the new application for a few months, it should be noted that the feedback received thus far is incomplete and should be re-evaluated at least once each year. The survey was done through Survey Monkey and the recipients were given one week to respond. Participation was encouraged but not required. A copy of the survey and results are included in this document as Appendix E.

Despite the large population of users that the survey was sent to, the total number of respondents was only 100 users and according to the results only 85% had actually used the new system. Seventy percent (70%) of those that did use the system however are using it more than once a week or even daily to accomplish their tasks. The survey also questioned the satisfaction of users with the simplicity of the application's interface, the speed of the application and the accuracy of the data that they were finding. For simplicity of the interface, users were split down the middle with 44% reporting that they were Very Satisfied and 52% reporting they were Somewhat Satisfied. Seventy-one percent (71%) of users were Very Satisfied with the speed of the application, but accuracy was split again with 45% Very Satisfied and 46% Somewhat Satisfied. Less than 10% were dissatisfied in each category.

Knowing that the intent of the application was truly to detect project conflicts, the survey clearly brought to light that the application is being used for far more than that. Users were asked to select all choices that they were currently using P2S to accomplish. The majority of users were Searching for Project information or Searching for Charge Code information. The Search Charge Code feature of P2S was not even added until three months prior to the application's launch and surprisingly is the second most common use for the tool. It was also reported as the top response for Question 8 regarding what information or data in P2S is the most useful.

The last portion of the survey focused on user responses for improvements that can be made to the system to make it more useful and/or efficient. Responses varied from grandfathering in all information from other applications to be made available in P2S to providing more information regarding environmental and right of way data in the system. One thing that was brought up consistently was that users felt there should have been or should be more hands on training provided. Prior to implementation, only users who were responsible for input or edit of information were given training. This included approximately 200 users in Preconstruction, Traffic Engineering, Obligations Management, and representatives in each District office. A copy of the P2S User's Manual and Training Guide can be found in Appendix C and D respectively. However, the response received in the survey leads to the conclusion that the work is not finished. On-going training for P2S must be made available for all users. Since a large portion of our employees do not reside in a centralized location, on-site training is limited and costly. It is recommended to look into innovative training options such as eLearning and web demonstrations that would allow users to access training links on demand.

To date, there have also been two known cases of project overlap that were detected with the P2S application. One was an interstate safety improvement on I-20 that was identified by the Traffic Engineering office. When the project was entered into P2S, the user was able to see that there was an upcoming widening project being handled by Preconstruction that encompassed the entire safety project. All safety improvements will now be incorporated into the scope of the widening and it will result in a more efficient and cost effective project. The same scenario occurred with a newly programmed bridge rehabilitation project that is in the same location of a county sales tax funded widening project. Since the overlap was detected early, the agency can leverage our funding by combining the projects in the most advantageous way. Below is an example of the P2S Project Conflict report that was produced as a result of the second example.

South Carolina Department of Transportation
PROJECT LOCATION CONFLICT REPORT
Project P026826 - SC 274 Bridge over Mill Creek Rehab
2/13/2014

Print | Map Conflicting Routes

Location	BMP	EMP	Project ID	Description	Manager	Phase
YORK SC 274 W - Bridge	**15.610**	**15.610**				
SC 274 W	15.120	16.000	0042325	JUST N OF SC 274 & SC 49 NC STATE LINE (POLE BRANCH ROAD). SC 274 WIDENING	Brian Klauk	Approved
SC 274 W - Bridge	15.120	16.000	0042325	JUST N OF SC 274 & SC 49 NC STATE LINE (POLE BRANCH ROAD). SC 274 WIDENING	Brian Klauk	Approved

Conclusion

In summary, the development and implementation of a new Project Programming System (P2S) was a major accomplishment for the Department of Transportation in that we migrated from a 20+ year legacy system with no overlap of the applications. The legacy PPMS system was shut down to users on September 20, 2013 and users were live in the new system on October 4, 2013. All relevant data was successfully migrated over to the new system in a matter of weeks and essential personnel were trained in a two week timeframe.

Overall, the application has been well received by users and seems to be accomplishing many of the needs brought forth in the initial evaluation. As with all new systems and processes, there have been bugs and workflow issues that need to be addressed. Moving forward, it is recommended to continue development of on-going training using modified methods such as web based demonstrations. It is also imperative that the PAR Procedures Document be revised and tailored to planning and programming projects in P2S. This will alleviate many of the uncertainties that users have when entering data into the system. It will also address process workflow issues related to setting up charge codes for projects, adding additional funding to projects, and requesting closure of projects.

Lastly, potential upgrades and enhancements of this application should include evaluation of further integration with the Primavera CPM (critical path method) scheduling software and a document management solution such as ProjectWise. Integration with these types of applications will allow users to access all project related data and documents within P2S which will further establish a definitive source for transportation project information.

SCDOT

ITMS Task Order 8

Project Programming System

Deliverable 2 - Design Document

Version 2

Submitted By

PMG SOFTWARE PROFESSIONALS

August 4th 2011

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1. Overview

1.1 Document Purpose

The P2S Software Design document is a detailed and thorough compilation of the P2S software application. It contains in-depth descriptions and pictorials of each software component along with explanations of each integration point. Due to its comprehensive nature, this document is beneficial in many ways, and it is anticipated that it will serve the Department well, long after the software application is built and in production.

While this document has many uses, it serves two primary purposes:

1. Most importantly, it explains to users in detail what they can expect from the system.
2. It is used by the project team as a blueprint for software development and system implementation.

1.2 Process

This document is the culmination of many conversations, meetings, discussions and conferences held with stakeholders to understand existing project programming and tracking methods and to define and delineate new, more efficient methods. It began in the fall of 2009 when individuals gathered to understand current processes, methods and data for tracking projects. The resulting report recommended a single, trusted source for project programming information, and P2S was born.

Since that time countless conversations have taken place to address the multitude of issues necessary to migrate PPMS project information into a new and improved system. There has been no silver bullet methodology. The information in this document came from an enormous amount of hard work from all involved. Meetings and discussions addressed each process step, issue by issue and detail by detail. There simply is no substitute for this approach, and the benefits to the Department are many and far outweigh the effort required.

It should be noted that while this document is very detailed and has been reviewed numerous times, it is, and will be a "living document". In a project of this size and magnitude with so many variables, it is inevitable that some issues have slipped through the cracks. We plan to manage these issues as they become evident during the project lifecycle. While we anticipate these latent issues to be relatively minor, they may have an impact on the system design.

2. Software Design

2.1 Mapping of Projects

PMG will provide the ability to map any project, or any set of projects as the results of a search or query. Users will not be required to exit one system and enter another to view the map display. Projects must contain route and milepoint location information in order to be mapped.

2.1.1 Home Screen

A map will display upon entry to P2S. The first time user will see the map zoomed out to statewide coverage with no projects yet showing. The user may select a set of projects to show on the map by clicking on the *Change Map Display* link located above the map. The following mockup shows the P2S starting screen after some projects have been selected:

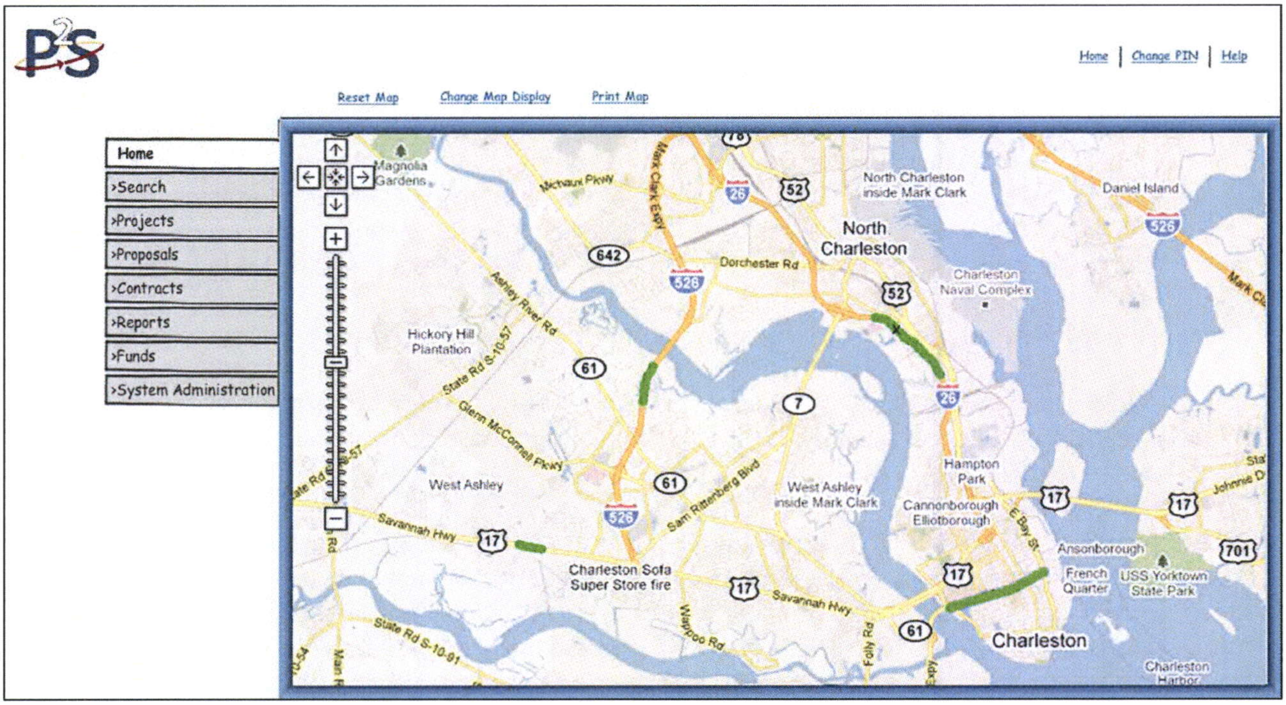


Figure 1 - Map on P2S Home Screen

Google maps will be used as the backdrop. Projects will be highlighted on top of the Google roads. The Projects layer will use the same symbology that is used to display projects in ITMS.

The tools associated with the map include:

Reset Map –This link will clear any mapped queries and put the display back to statewide zoom.
Change Map Display – This link will open an interface that allows selection of projects by RPG, District, County, MPO or COG. See section 3.4.2 for more information about this interface.
Print Map – This link will print the map and any open map bubbles.

2.1.2 Change Map Display

This group of options applies a filter that will display all of the projects in a particular RPG, District, County, MPO, or COG. Alternatively, the user may select from a unique list of projects that are associated with the detected userid. The following mockup shows the Change Map Display interface:

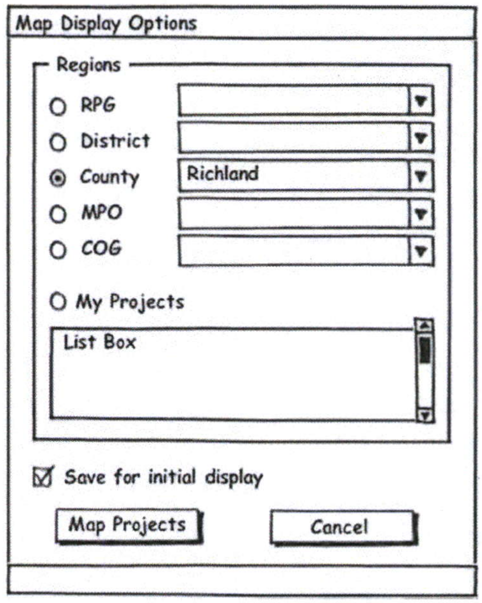


Figure 2 - Change Map Display Interface

The options for map display include:

Regions – The user may expand any of this group of drop down boxes and select a region from the list. The region categories include Regional Production Group (RPG), District, County, Metropolitan Planning Organization (MPO), and Council of Governments (COG). If the radio button next to a drop down box is selected, all of the projects in that area will be displayed on the map.
My Projects – This additional radio button will be available if the application detects that the current user is a user with the ability to plan or program projects. The list box below it will be populated with all of the projects in the user's area of responsibility. Multiple projects may be selected from the list.
Save for Initial Display – If desired, the user may check this box before applying the map display filter. If the box is checked, P2S will save the current selections and will display them on the map each time the application is opened in the future.
Map Projects – This button will dismiss the Change Map Display interface and add the selected projects to the map.

2.1.3 Map Bubble

When the user hovers over a project with the mouse, a Google pop-up bubble will appear with additional information about the project. The bubble will list the project name, project ID and project description. Links will be shown below the project information that allow the user to open the project Summary Report in a separate window, or to show the project within ITMS. The following image is an example of the pop-up display:

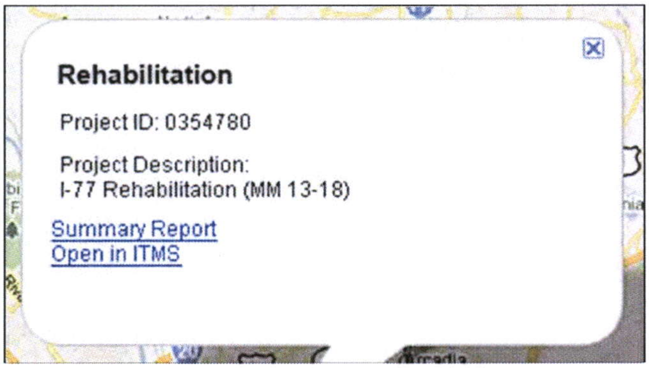


Figure 3 - Project Pop-Up Bubble

This bubble will disappear if the mouse is moved away. Clicking on the bubble will cause it to remain open and to be printed along with the map if the print button is pressed.

2.1.4 Distinct Map Window

The user will have the ability to initiate a map that looks like the one on the home screen from other pages internal to P2S. This map will have the same tools associated with the home screen map, but will open in its own separate window.

For example, there will be a Map Project link on the project's General Information tab. The following mockup shows the location of this link on the lower portion of the page:

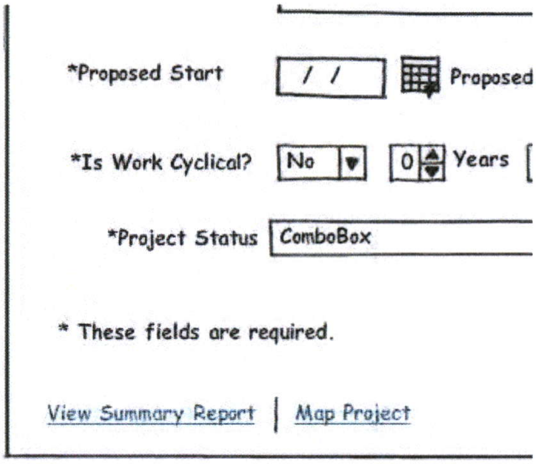


Figure 4 - Map Project link on project General Information tab

The user may click on the Map Project link to see the project that is described on the General Information tab shown on a map.

The user will also have the ability to display the results of an ad-hoc query on a map. The ad-hoc query tool, located under the Reports menu, will allow the user to search for a project using a complex query constructed from any combination of database fields and Boolean logical operators. At the bottom of the search results page will be an option to open a map showing all of the projects returned.

Any map that is initiated from a page within P2S will open in a new window that operates independently of the map on the home screen. The three map tools: Reset Map, Change Map Display, and Print Map will be available in all map windows.

2.2 Search

The Search section of P2S allows users quick access to view project, contract and proposal information. Information accessed through this section is "view only". No modifications or edits are permitted.

2.2.1 Projects

The Search Project section of P2S allows all users to view P2S project information. No modifications are allowed while in view mode, even for system administrators. When the Search tab is selected in P2S, the user is presented with a screen providing criteria options to search for projects. Once a project is selected from the search results, the project information is displayed in the appropriate tabs. Each tab contains particular information about the selected project, and is described in later sections of this document.

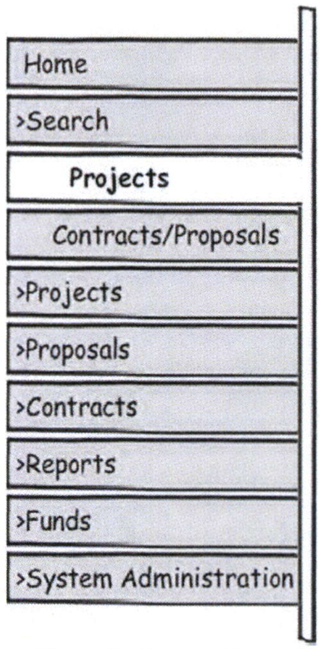


Figure 5 - Search Menu

The Search Project screen is shown here:

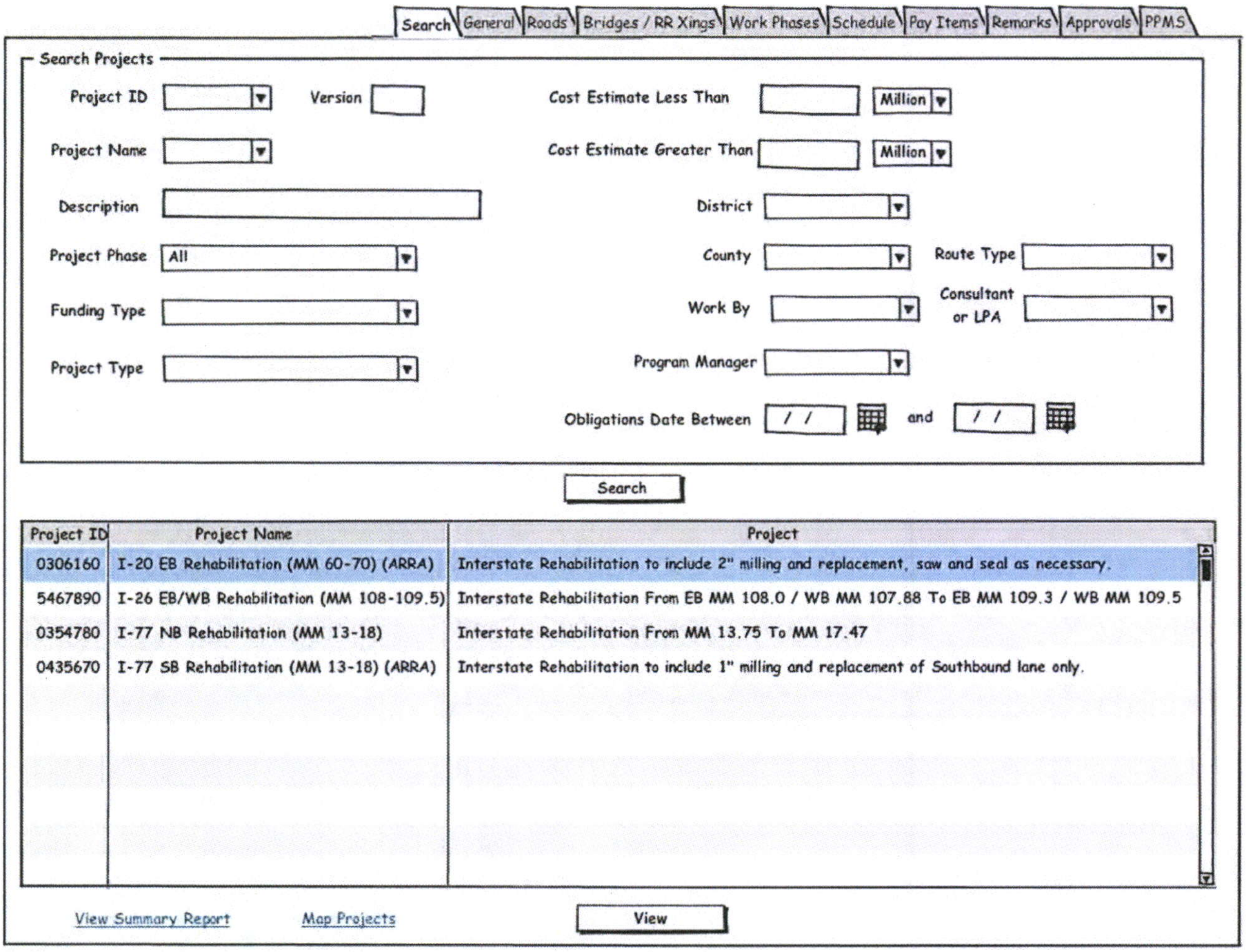


Figure 6 - Search Projects

The following fields are available for entering information to be used as criteria for the project search:

- **Project ID** - This is a drop down list of Project IDs associated with the user.
- **Version** – This is a system generated field which represents the version of the project. The project version begins at 0 and is automatically incremented by 1 each time it is relet.
- **Project Name** – This is a drop down list of project names associated with the user.
- **Description** – This is a free form key-in field. A wild card search will be executed on whatever text is entered. For example, if the user enters only the text “Rehabilitation,” any project with the word “Rehabilitation” will be shown in the results.
- **Project Phase** – This is a drop down list containing three options:
    - All – This option selects projects in any P2S phase
    - Planned – This option selects only projects in the Plan phase of P2S
    - Program – This option selects only projects in the Program phase of P2S
- **Funding Type** – This is a drop down list containing the funding types available for selection.
- **Project Type** – This is a drop down list containing a list of available Project Types.
- **Cost Estimate Less Than** – This is a free form key-in field to set a search threshold to locate projects with values less than the amount entered.

- **Cost Estimate Greater Than** – This is a free form key-in field to set a search threshold to locate projects with values greater than the amount entered.
- **District** – This is a drop down list containing the names of the Engineering Districts.
- **County** – This is a drop down list containing the names and numbers of all counties in South Carolina.
- **Route Type** – This is a drop down list containing the list of available route types for selection.
- **Work By** - This is a drop down list which identifies the party performing the work. The three options are:
    - SCDOT
    - Consultant Firm
    - Local Public Agency (LPA)
- **Consultant or LPA** – This is a drop down list containing names for the consultant or LPA. A wild card search will be conducted for this information similar to the Description field discussed previously.
- **Obligation Date Between** – These are two key-in date fields for locating projects between them.
- **Program Manager** – This is a drop down list containing the names of program managers.

Once criteria are entered, the Search button is selected and the results of the search are displayed in the lower half of the interface as shown in the mockup above. The user can then highlight one of the projects found in the search for viewing.

2.2.2 Contracts/ Proposals

The Search Contracts/Proposals section in P2S allows users to search and view previously created contracts or proposals. Similar to the Search Projects section described previously, no modifications are allowed to contracts or proposals from the Search mode.

The Search Contracts/Proposals section is accessed by a tab found in the menu below:

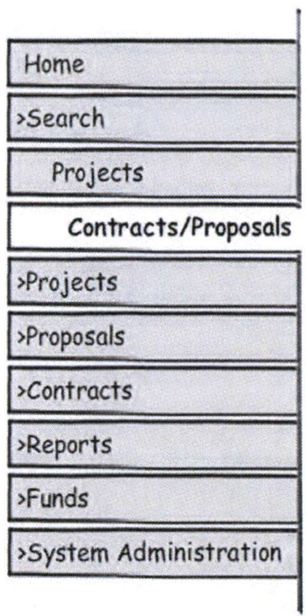


Figure 7 - Contracts/Proposals Menu

Once the menu item is selected, the following search interface will display:

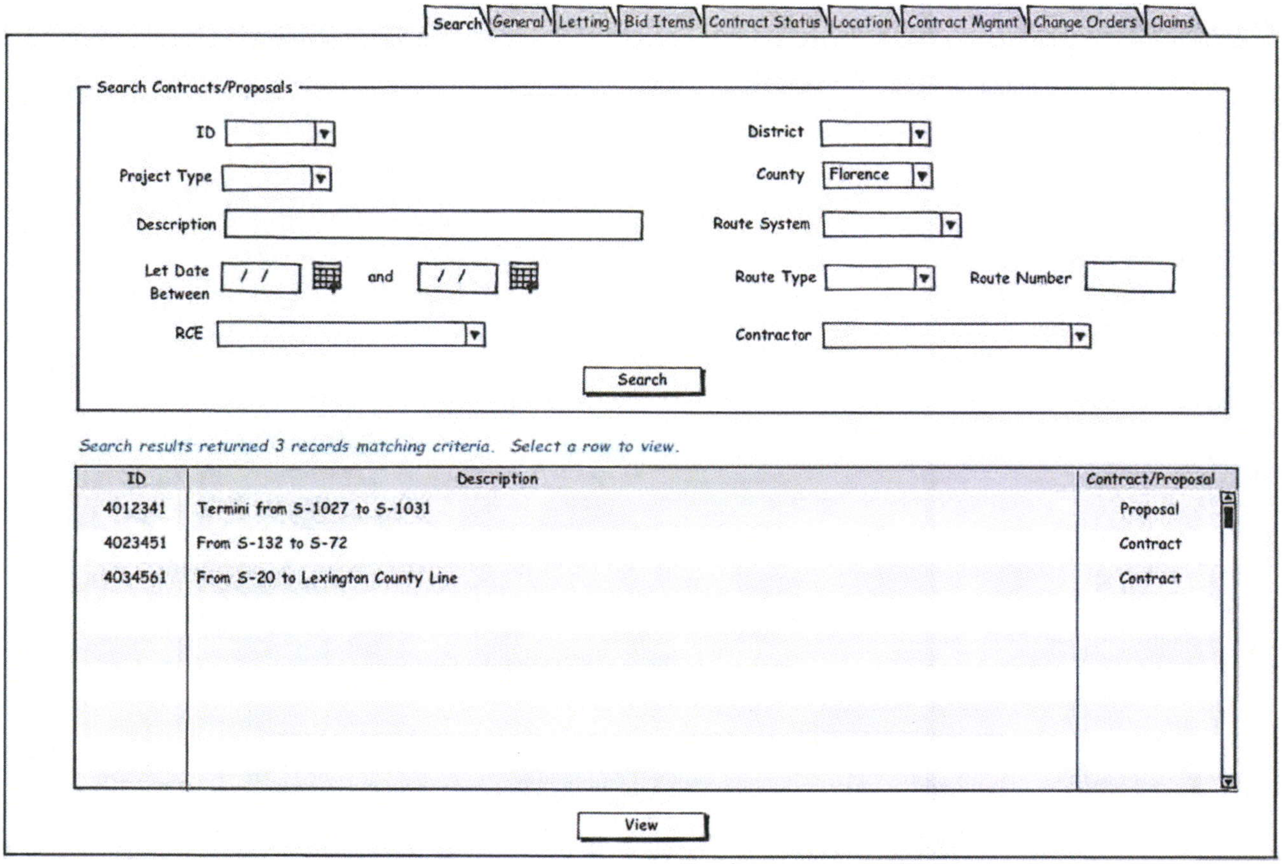


Figure 8 - Search Proposals/Contracts

From this interface, the user is able to enter various criteria to create the desired filter for locating and viewing contracts and proposals. Tabs containing specific information about the selected contract or proposal are described in a later section of this document.

The following search fields are available for defining criteria for the filter:

Contract No. – This drop-down box is a list of all of the contract ID numbers in the system.

Project Type – This drop-down box is a list of project types.

Description – This text box allows the user to type in a contract description. A "wildcard" search is performed on the entered text.

Let Date Between- This is a date range locating contracts or proposals having a proposed or actual let between the dates entered. If only the first date is entered, all records having the let date greater than or equal to this date will be returned.

District – This drop down box is a list of Districts 1-7.

County – This drop down box is a list of counties in South Carolina.

Route System – This drop down box contains the route systems of Interstate, Primary, and Secondary.

Route Type – This drop down box is a list of route types. The available route types include Interstate, US, SC, Secondary, and Local.

Route Number – This numeric entry field allows the user to type in a route number.

RCE – This drop down box is a list of each Resident Construction Engineer (RCE) in the system.

Contractor – This drop down box contains a list of all of the contractors in the system.

Once the desired criteria has been entered, the user will select the **Search** button. Once search results are returned, the user may highlight a record and choose the **View** button. When selected, the View button will bring the General tab to the front, populated with the information for the selected contract or proposal.

2.3 Projects

Fundamental to P2S is the ability to plan and program projects. The following sections of this document describe in detail how these critical functions are addressed by the system, and how users interact with the system to achieve the desired results.

2.3.1 Plan New Project

P2S provides the capability for users to plan new projects. When a project is planned, particulars regarding the project are captured and logged into the system. For example, the project name and description are required while the entry of other project information is left to the discretion of the user. Other information that may be entered at this time is funding type, engineering rank, and location among others. A complete list of all project information available for entry into the system is detailed in a later section. While in the planning stage, project information may be added or modified at will with no approvals necessary. An important aspect of planning a project in P2S is that the Project ID is created at this time. The Project ID is the unique identifier for the project, and is associated with the project throughout its lifecycle.

> ***Project ID*** *- The Project ID is created and assigned during project planning. The Project ID is a seven (7) digit system generated number that is assigned automatically upon P2S project creation.*

The Plan section of P2S exists for the purpose of encouraging users to enter project information into the system at an early stage. This increases situational awareness in that other users of the system have the ability to understand what is being planned at a particular location. In this way, discrepancies may be identified and avoided. Several P2S reports that are discussed in a later section will aid in the identification of conflicting projects. The point at which a project is first entered into P2S is a decision to be made by those in authority, but early entry is encouraged. It is understood that not all projects that are planned in P2S will be programmed. P2S then becomes the holder for all project information.

It is recommended that a project remain in the Plan section of P2S until the program manager is ready to obligate funds. When a project is saved in the Program section of P2S, additional information is required which the user may not be prepared to enter until an obligation request is needed. While some projects that are planned in P2S will not be programmed, be aware that any project that is programmed must be planned first. The project programming process is explained in a later section.

> ***Plan First*** *- A project must be planned in P2S before it is programmed.*

Several options exist for defining a project's location. Defining a project location is very important and is required by P2S. It is advised and highly recommended to enter specific route information including specific milepoints whenever possible. The system uses this route and milepoint information to detect overlapping or conflicting projects.

> ***Project Location** – It is important to accurately define the project's location in terms of routes and milepoints.*

When the Plan tab is selected in P2S, the user is presented with a screen that allows options to search existing planned projects or to plan a new project. It should be noted that only projects in the planning stage (those not yet programmed) will be located by this search. Since projects in this section of P2S are available for editing, only projects for which the user owns responsibility (i.e. creator of project, program manager and anyone in the creator's hierarchy) shall be located and displayed. If a user wishes to see all projects that are owned by that user, simply select the Search button without entering any criteria.

The mockup below shows the search screen.

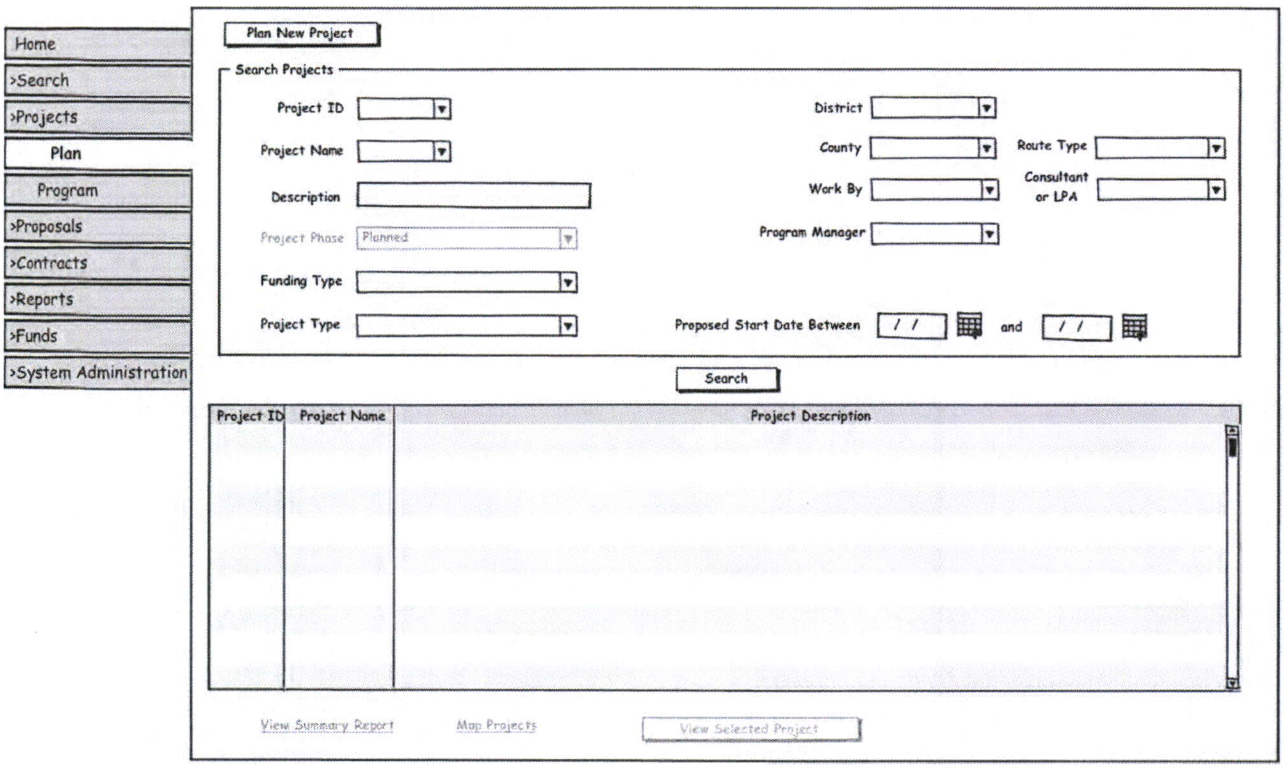


Figure 9 - Entry search screen for project planning

The following fields are available for entering information to be used as criteria for the project search:

- **Project ID** - This is a drop down list of Project IDs associated with the user.
- **Project Name** – This is a drop down list of project names associated with the user.

- **Description** – This is a free form key-in field. A wild card search will be executed on whatever text is entered. For example, if the user enters only the text "Rehabilitation", any project with the word "Rehabilitation" will be shown in the results.
- **Work By** - This is a drop down list which identifies the party performing the work. The three options are:
  - SCDOT
  - Consultant Firm
  - Local Public Agency (LPA)
- **Consultant or LPA** – This is a drop down list containing names for the consultant or LPA.
- **District** – This is a drop down list containing the names of the Engineering Districts.
- **County** – This is a drop down list containing the names and numbers of all counties in South Carolina.
- **Route Type** – This is a drop down list containing the list of available route types for selection.
- **Funding Type** – This is a drop down list containing the funding types available for selection.
- **Project Type** – This is a drop down list containing a list of available Project Types.
- **Project Phase** – This field is set to Planned, and is unable to be changed by the user.
- **Program Manager** – This is a drop down list containing the names of all program managers.
- **Proposed Start Date Between**- This is a date range locating projects between the dates entered.

Once criteria are entered, the Search button is selected and the results of the search are displayed in the lower half of the interface as shown below. The user can then highlight one of the projects found in the search for editing, viewing or reporting.

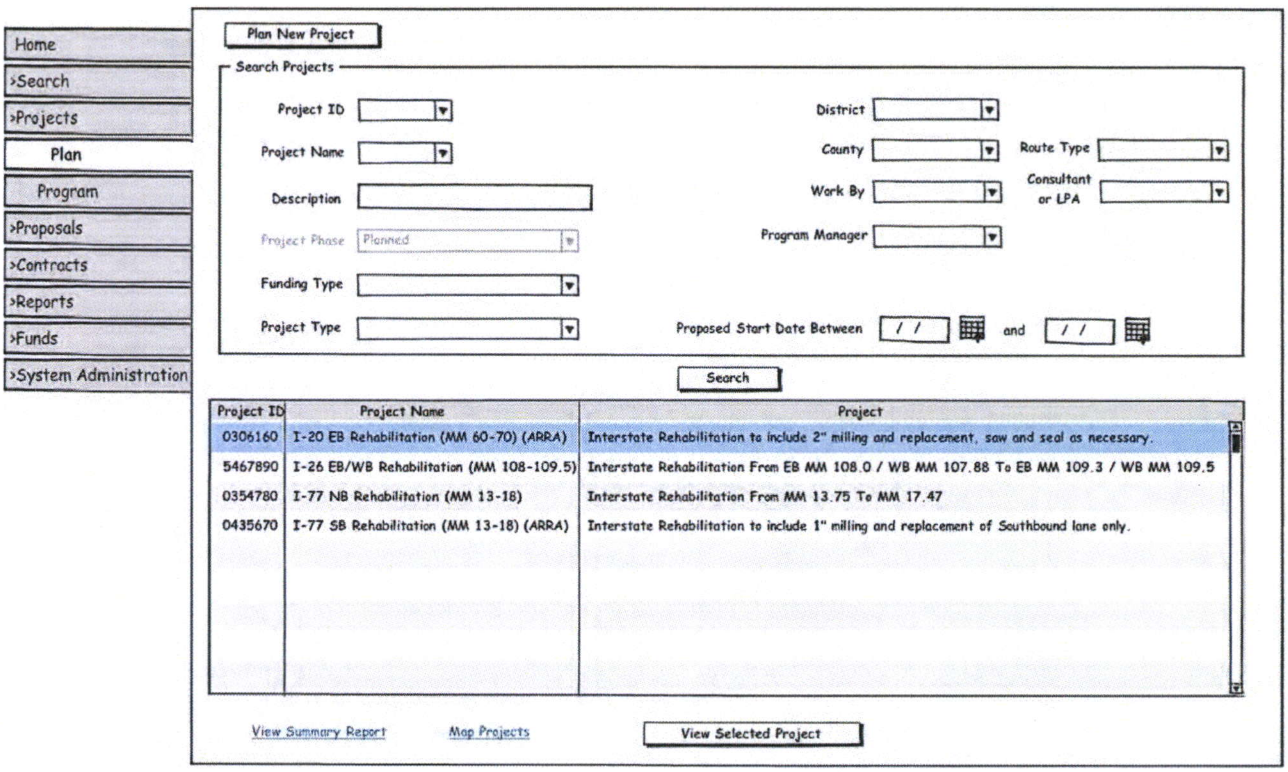


Figure 10 - Search Results

Each row of information in the search results represents a project that has met the entered criteria. For each project listed in the results, the Project ID, Project Name, and Project Description are shown. The user is then able to highlight a project and select a link to view a report or a button to view or modify project information.

The following links and buttons are available for a selected project:

- **View Selected Project** - This is a button that will display the highlighted project in the General tab for viewing and/or editing.
- **View Summary Report –** This is a link that will display a report containing summary information for the selected project.
- **Map Projects** – This is a link that will map the projects resulting from the search.

If the user opts to create a new project, the Plan New Project button is selected which causes the Plan New Project screen to be presented for user input.

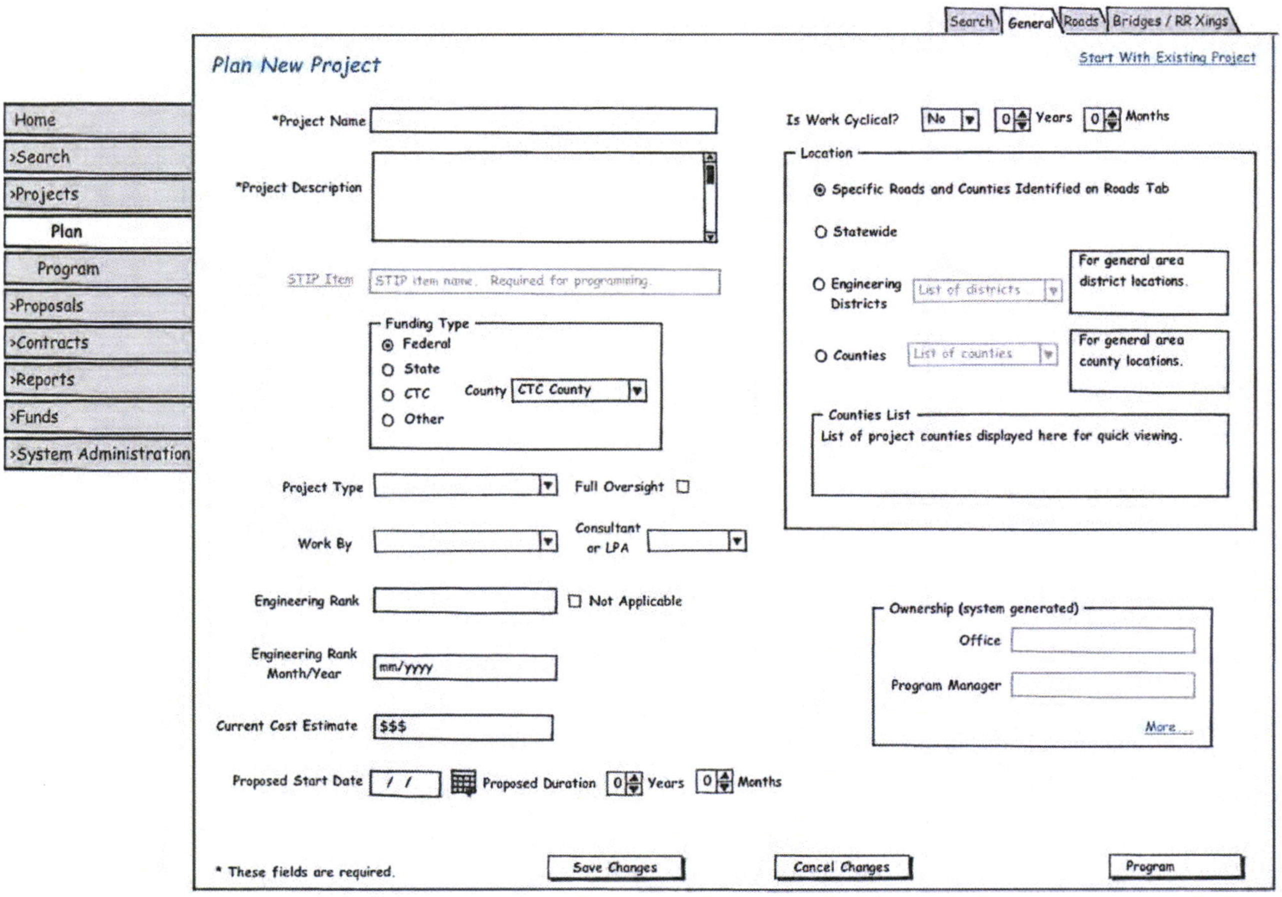


Figure 11 - Plan New Project initial screen

When a new project is created and planned, the user is able to enter pertinent information about the project on the General tab as shown above. It is recommended that enough identifying information is entered to allow the user to easily locate the project in the system as the result of a search. If a previously planned similar project exists, the user has the option to choose the Start with Existing Project link which will allow the user to begin the new project with duplicate information copied from another. The Project ID for the new project will be unique and assigned by the system as discussed previously.

When the project is saved for the first time, the system generates the unique Project ID and displays the ID in the top left of the General tab as shown in the mockup below.

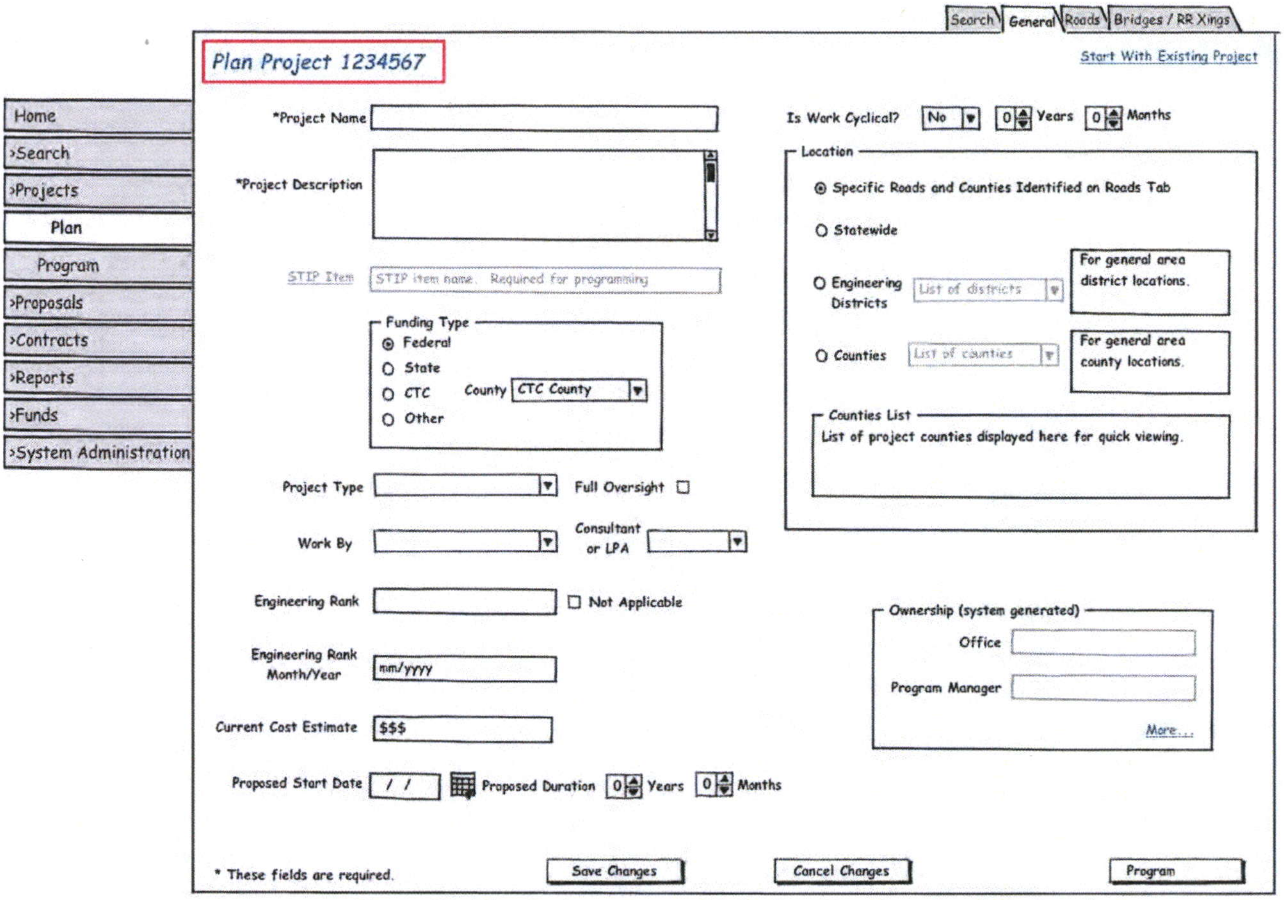


Figure 12 - Plan Project screen with Project ID assigned and displayed

The following fields and options are available for entry and selection when planning a project:

- **Project Name** – This is a free form key-in field for the project name. This field is required.
- **Project Description** – This is a free form key-in field for the project description. This field is required.
- **STIP Item** – This field is disabled as newly planned projects may not have a STIP entry. This field, however, is required when the project is programmed.
- **Funding Type** – This is a group box listing four funding types available for selection. Only one type can be selected. The funding types are:
    - **Federal** – Select this funding type for Federal Aid projects.
    - **State** – Select this funding type for state funded projects.
    - **CTC** – Select this funding type for C Programs and select the appropriate county from the drop down list. If this funding type is selected, the Work By field is automatically set to either SCDOT or LPA.
- **Project Type** – This drop-down box is a list that identifies the type of project.
- **Full Oversight** – This is a checkbox indicating whether or not the project falls under federal full oversight.

- **Work By** – This is a drop down list that identifies the party performing the work. The three options are:
    - SCDOT
    - Consultant Firm
    - Local Public Agency (LPA)

- **Consultant or LPA** – This is a drop down list containing names for the consultant or LPA. An "Add New..." option will exist for users to create a new item for the list. This field becomes enabled when Consultant or LPA is selected from the Work By drop down list.
- **Engineering Rank** – This is a free form key-in field to display the project's engineering rank. If engineering rank is not applicable for this project, the user can select the Not Applicable check box.
- **Engineering Rank Month/Year** – This indicates the month and year that the engineering rank was determined.
- **Current Cost Estimate** – This is a free form key-in field for the cost estimate of the project.
- **Proposed Start Date** – This is a field to hold the proposed project start date. The date helper tool will aid in selecting the date and will fill in the date field.
- **Proposed Duration** – This shows the proposed project duration and can be shown in years and/or months.
- **Is Work Cyclical** – This is a drop down list to tell the system whether the project is cyclical along with the cycle time frame. Signing projects are an example. When the cycle for a new project draws near, the system will send a notification via email to the program manager.
- **Location** – The location group box contains several options for users to define the project location.
    - **Specific Roads and Counties Identified on Roads Tab –** This option allows the user to enter the project counties and routes on the Routes tab. The process for defining routes via the Routes tab is described in a later section.
    - **Statewide** – This option is available for defining the general area of a project when parts of it lie in different areas of the state. If this option is chosen, the Routes tab in P2S will be disabled. As mentioned earlier, routes and milepoints should be used if this information is known. If this location option is chosen, there is no way for the system to use this project to detect overlaps or conflicts.
    - **Engineering Districts** – This option allows the user to define one or more engineering districts as the project location. If this option is chosen, the Routes tab in P2S will be disabled. As mentioned earlier, routes and milepoints should be used if this information is known. If this location option is chosen, there is no way for the system to use this project to detect overlaps or conflicts.
    - **Counties** – This option allows the user to define one or more counties as the project location. If this option is chosen, the Routes tab in P2S will be disabled. As mentioned earlier, routes and milepoints should be used if this information is known. If this location option is chosen, there is no way for the system to use this project to detect overlaps or conflicts.
    - **Counties List** – This box will display a list of all counties where the project exists. The list of counties is obtained from the Routes tab or the other location options discussed above. The list box is view only and exists for users to quickly see in which county or counties the project falls.
- **Ownership** – This is a group box containing system generated information pertaining to the user who created the project. This information is view only and is not available for modification. Two fields are displayed by default:
    - **Office** – This field displays the Office of the program manager.

- **Program Manager** – This field displays the program manager for the project.
- **More…** - This is a link which displays a screen with additional ownership information as shown.

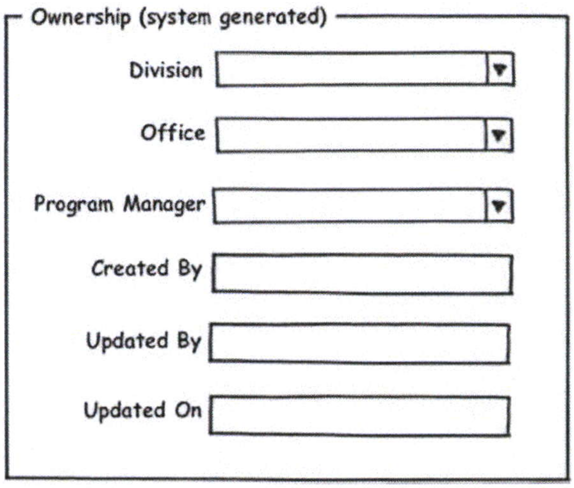


Figure 13 - Additional ownership information displayed from the More… link

- **Division** – This field lists the division of the program manager.
- **Created By** – This field lists the user who created the project.
- **Updated By** – This field lists the user who last updated the project.
- **Updated On** – This field lists the date of the last update to the project.

The General tab interface contains the following buttons and links:

- **Start With Existing Project** – This link enables the user to use an existing project as a template to create a new one. All information on the General Info, Roads, Bridges/RR Xings and Pay Items tabs will be copied to the new project with the exception of the Project ID, the Project Name and the Project Description. The link will display a project search interface to aid the user in project selection for duplication.
- **Save Changes** – When selected, this button will save all changes on the tab to the database.
- **Cancel Changes** – When selected, this button will not save any changes made on the tab and will revert the values back to the pre-modified state.
- **Program Project** – This button is used to begin the programming process for the active project. It is suggested that a project remain in the planning section of P2S until the program manager is ready to request funding through an obligation. This button when selected will save all information including changes and will exit the user from the planning section of P2S and display the active project in the programming section of P2S. From this point, the user can enter additional required information and submit a request to obligate funds for the project. The description of this section follows.

2.3.2 Program Project

P2S provides the ability to program a project. A project is said to be programmed when a request to obligate funding has been approved. A project must first be planned in P2S before it is eligible to be programmed as previously mentioned and described in section 3.2.1 Plan New Project. When a user chooses to program a project, the project to be programmed must first be chosen from a list of previously planned projects. Once a project is chosen, all information existing in P2S for the selected project is carried over from the Plan section of

P2S into the Program section of P2S where additional information is required. At this point, work phase and funding information is appropriately entered, necessary approvals are obtained and funding is authorized. This process may occur any number of times at the request of the program manager. P2S is updated accordingly and gives a detailed account of the project funding history.

Within the Program section of P2S there are 9 tabs containing different types of information pertaining to the selected project. These tabs are:

- **General**– This tab contains high level but very important information pertaining to the project.
- **Roads** – This tab describes the routes included in the project.
- **Bridges/RR Xings** – This tab describes the bridges and/or railroad crossings included in the project.
- **Work Phases** – This tab contains all project work phases with funding information for each.
- **Schedule** – This tab contains schedule information obtained from Primavera.
- **Pay Items** – This tab contains the project Pay Items used for letting.
- **Remarks** – This tab contains comments about the project.
- **Approvals** – This tab contains information to manage the approval processes.
- **PPMS** – This tab contains information from PPMS necessary to maintain the project in P2S. This information will not exist for new projects created in P2S. The PPMS tab will only be visible for projects which once existed in PPMS.

When a user first enters the Program section of P2S, a search screen appears enabling the user to search for and select a project to be programmed, modified or viewed. It may be that this project is ready for its first funding obligation, or perhaps the user simply wishes to change or view previously entered information. Therefore, the project search in the Program section of P2S allows users to search and locate projects in any stage (i.e. Planned or Programmed). This is in contrast to the search in the Plan section which only locates projects in the planning phase. Because project modifications are allowed, only those projects owned by the user will be displayed in the search results for selection.

Project Modification - Once a project has been programmed, the user must locate the project in the Program section of P2S in order to change or modify any project information.

The mockup below shows the search screen:

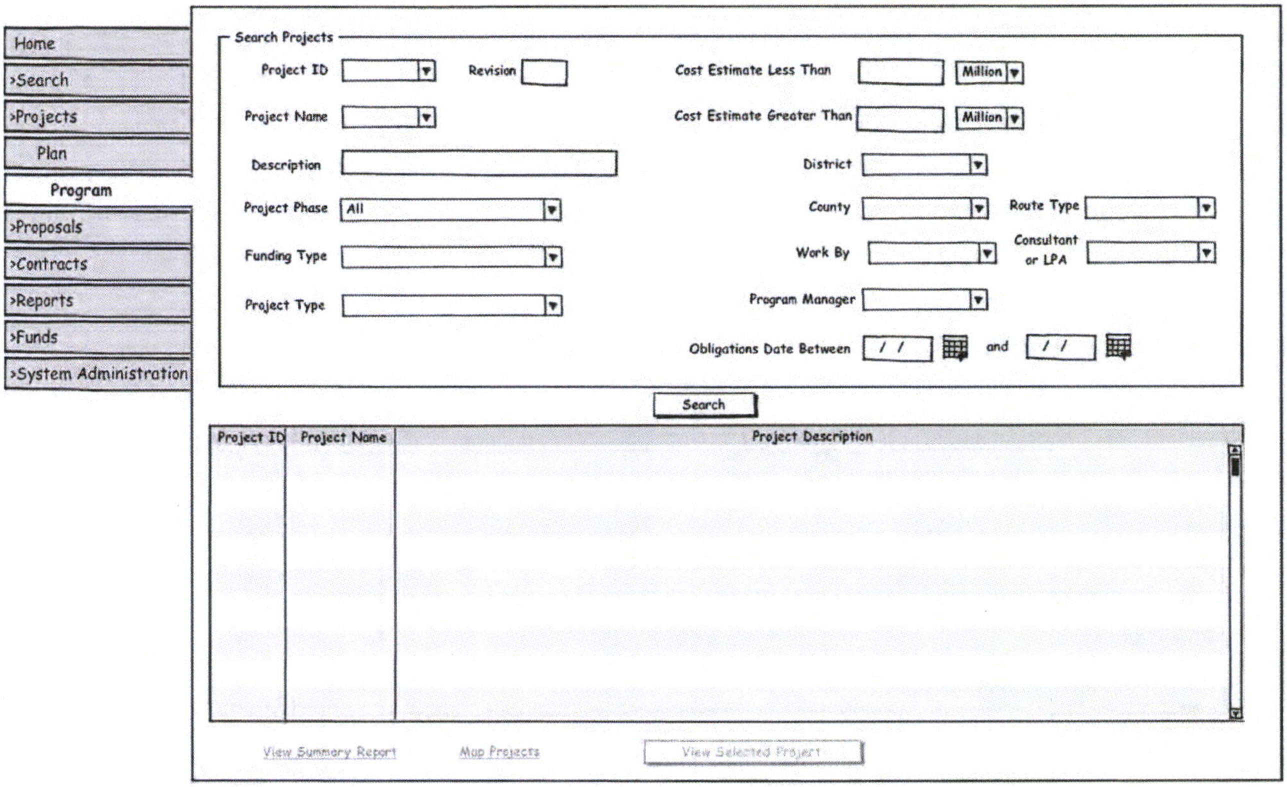


Figure 14 - Entry search screen for project programming

The following fields are available for entering information to be used as criteria for the project search:

- **Project ID** - This is a drop down list of Project IDs associated with the user.
- **Project Name** – This is a drop down list of project names associated with the user.
- **Description** – This is a free form key-in field. A wild card search will be executed on whatever text is entered. For example, if the user enters only the text "Rehabilitation," any project with the word "Rehabilitation" will be shown in the results.
- **Project Phase** – This is a drop down list containing three options:
  - All – This option selects projects in any P2S phase
  - Planned – This option selects only projects in the Plan phase of P2S
  - Program – This option selects only projects in the Program phase of P2S
- **Funding Type** – This is a drop down list containing the funding types available for selection.
- **Project Type** – This is a drop down list containing a list of available Project Types.
- **Cost Estimate Less Than** – This is a free form key-in field to set a search threshold to locate projects with values less than the amount entered.
- **Cost Estimate Greater Than** – This is a free form key-in field to set a search threshold to locate projects with values greater than the amount entered.
- **District** – This is a drop down list containing the names of the Engineering Districts.
- **County** – This is a drop down list containing the names and numbers of all counties in South Carolina.
- **Route Type** – This is a drop down list containing the list of available route types for selection.
- **Work By** - This is a drop down list which identifies the party performing the work. The three options are:

- SCDOT
- Consultant Firm
- Local Public Agency (LPA)

- **Consultant or LPA** – This is a drop down list containing names for the consultant or LPA. A wild card search will be conducted for this information similar to the Description field discussed previously.
- **Obligation Date Between** – These are two key-in date fields for locating projects between them.
- **Program Manager** – This is a drop down list containing the names of program managers.

Once criteria are entered, the Search button is selected and the results of the search are displayed in the lower half of the interface as shown below. The user can then highlight one of the projects found in the search for editing, viewing or reporting.

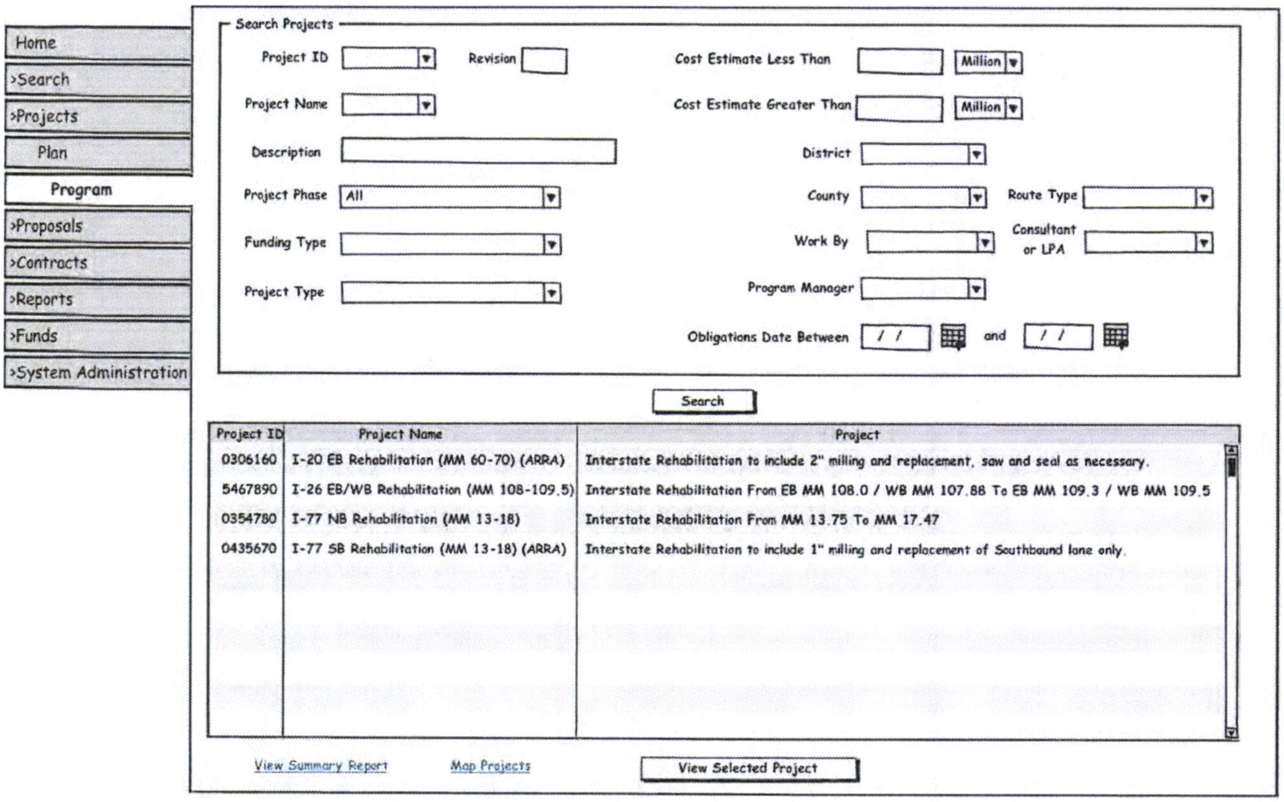


Figure 15 - Entry search screen for project programming with results

Each row of information in the search results represents a project that has met the entered criteria. For each project listed in the results, the Project ID, Project Name, and Project Description are shown. The user is then able to highlight a project and select a link to view a report or a button to view or modify project information.

The following links and buttons are available for a selected project:

- **View Selected Project** - This is a button which will display the highlighted project in the General tab for viewing and/or editing.
- **View Summary Report** – This is a link which will display a report containing summary information for the selected project.
- **Map Projects** – This is a link which will map the projects resulting from the search.

2.3.2.1 *General Tab*

Once a project is highlighted and the View Selected Project button is selected, the project is displayed with the General tab active. This tab was described in the Planning section of this document. However, additional fields are available for edit once the project is in the Programming phase. All fields on this tab are described below.

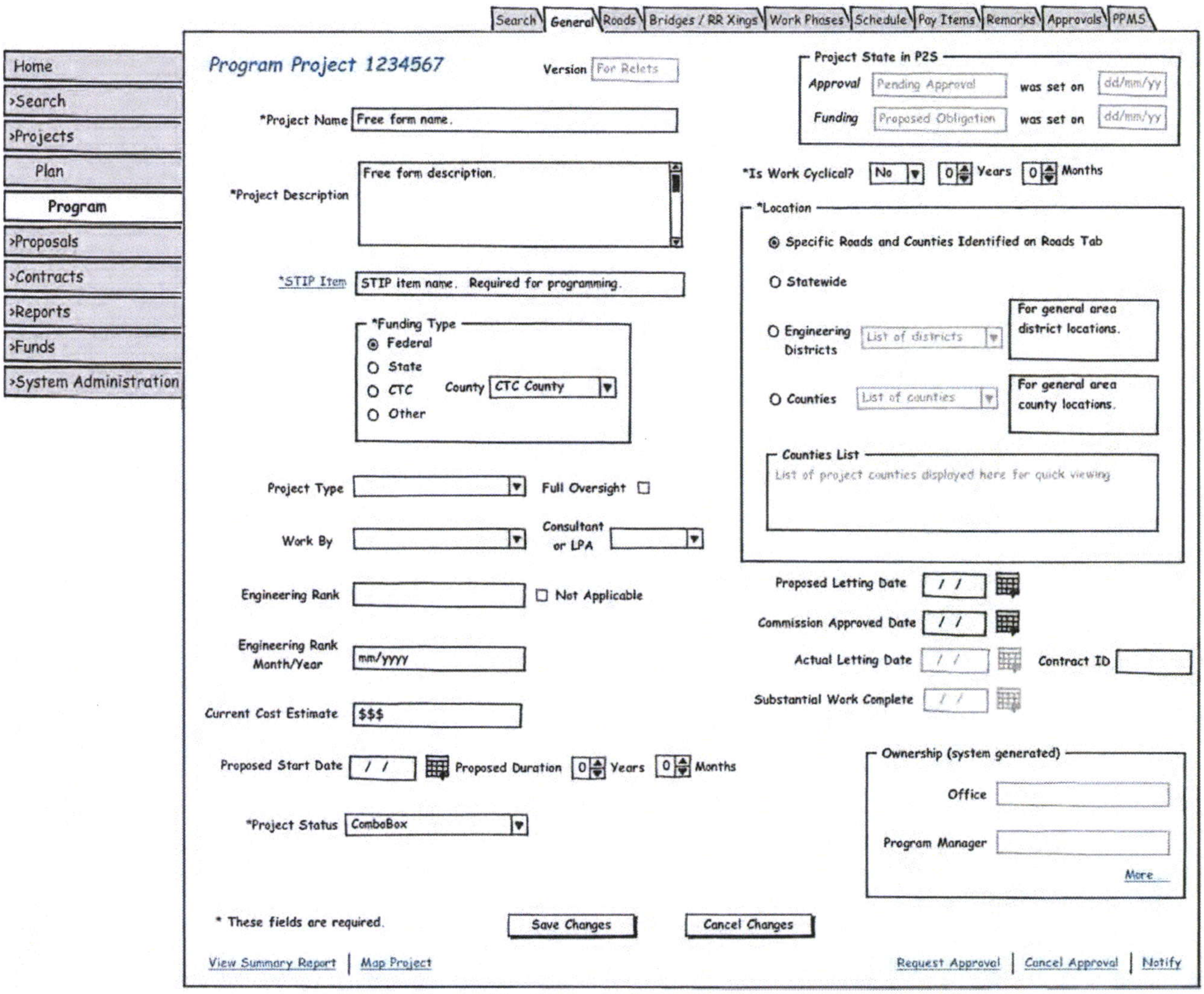


Figure 16 - General Information for project programming

The following fields and options are available for entry and selection on the General tab when programming a project:

- **Project Name** – This is a free form key-in field for the project name. This field is required.
- **Version** – This is a system generated field which represents the version of the project. The project version begins at 0 and is automatically incremented by 1 each time it is relet. For instance, the version will be set to 1 the first time the project is relet. Only the latest version of the project can be modified. This field is read-only. Use the View tab to search and view previous project versions.

- **Project Description** – This is a free form key-in field for the project description. This field is required.
- **STIP Item** – This is a drop down list displaying active STIP items to associate with the project. This field is required.
- **Funding Type** – This is a group box listing four general funding sources available for selection. Only one type can be selected. The Funding Type definition is required. The funding types are:
    - **Federal** – Select this funding type for Federal Aid projects.
    - **State** – Select this funding type for 100% state funded projects.
    - **CTC** – Select this funding type for C Programs and select the appropriate county from the drop down list. If this funding type is selected, the *Work By* field is automatically set to either SCDOT or LPA.
- **Project Type** – This is a drop down list which identifies the type of project.
- **Full Oversight** – This is a checkbox indicating whether or not the project falls under federal full oversight.

- **Work By** – This is a drop down list which identifies the party performing the work. The Work By definition is required. The three options are:
    - SCDOT
    - Consultant Firm
    - Local Public Agency (LPA)
- **Consultant or LPA** – This is a drop down list containing names for the consultant or LPA. An "Add New..." option will exist for users to create a new item for the list. This field becomes enabled when Consultant or LPA is selected from the Work By drop down list.
- **Engineering Rank** – This is a free form key-in field to display the project's engineering rank. If engineering rank is not applicable for this project, the user can select the Not Applicable check box. If the Not Applicable check box is not selected, this field is required.
- **Engineering Rank Month/Year** – The month and year that the engineering rank was determined.
- **Current Cost Estimate** – This is a free form key-in field for the cost estimate of the project. This field is required.
- **Proposed Start Date** – This is a display field to hold the proposed project start date. The date helper tool will aid in selecting the date and will fill in the date field. The Proposed Start Date is required.
- **Proposed Duration** – The proposed project duration can be shown in years and/or months.
- **Is Work Cyclical** – This is a drop down list to tell the system whether the project is cyclical along with the cycle time frame. Signing projects are an example. When the cycle for a new project draws near, the system will send a notification via email to the program manager. The Is Work Cyclical definition is required.
- **Project State in P2S** – This is system generated information notifying users as to the current P2S Approval and Funding state along with the date the project entered the state. A more thorough description of this information is detailed in section 2.3.2.4.5.
- **Location** – The location group box contains several options for users to define the project location. The Location is required.
    - **Specific Routes and Counties Identified on Routes Tab** – This option allows the user to enter the project counties and routes on the Routes tab. The process for defining routes via the Routes tab is described in a later section.

    - **Statewide** – This option is available for defining the general area of a project when parts of it lie in different areas of the state. If this option is chosen, the Routes tab in P2S will be disabled.

As mentioned earlier, routes and milepoints should be used if this information is known. If this location option is chosen, there is no way for the system to use this project to detect overlaps or conflicts.

  - **Engineering Districts** – This option allows the user to define one or more engineering districts as the project location. If this option is chosen, the Routes tab in P2S will be disabled. As mentioned earlier, routes and milepoints should be used if this information is known. If this location option is chosen, there is no way for the system to use this project to detect overlaps or conflicts.
  - **Counties** – This option allows the user to define one or more counties as the project location. If this option is chosen, the Routes tab in P2S will be disabled. As mentioned earlier, routes and milepoints should be used if this information is known. If this location option is chosen, there is no way for the system to use this project to detect overlaps or conflicts.
  - **Counties List** – This box will display a list of all counties where the project exists. The list of counties is obtained from the Routes tab or the other location options discussed above. The list box is view only and exists for users to quickly see in which county or counties the project falls.
- **Proposed Letting Date** – This is a key-in field displaying the proposed letting date. This field is important in that the monthly let list will be created using this date. The user may optionally select the calendar "helper" from which to select the date.
- **Actual Letting Date** – This is a read-only field showing the date of the actual letting. This field will be populated with information from LAS after the letting has occurred.
- **Contract ID** – This is the contract ID to which this project has been assigned. If this field is empty, this project has not been assigned to a contract.
- **Substantial Work Complete** – This is a read-only field showing information from SiteManager.
- **Ownership** – This is a group box containing system generated information pertaining to the user who created the project. This information is view-only and is not available for modification. Two fields are displayed by default:
  - **Office** – This field displays the Office of the program manager.
  - **Program Manager** – This field displays the program manager for the project.
  - **More…** - This is a link which displays a screen with additional ownership information as shown.

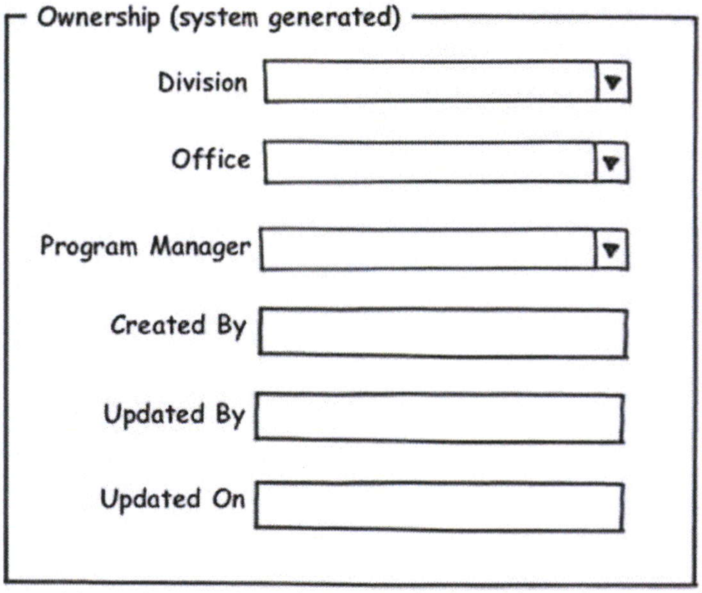


Figure 17 - Additional ownership information displayed from the More... link

- **Division** – This field lists the division of the program manager.
- **Created By** – This field lists the user who created the project.
- **Updated By** – This field lists the user who last updated the project.
- **Updated On** – This field lists the date of the last update to the project.

The General tab interface contains the following buttons and links:

- **Save Changes** – When selected, this button will save all changes on the tab to the database.
- **Cancel Changes** – When selected, this button will not save any changes made on the tab and will revert the values back to the pre-modified state.
- **Request Approval** – This link displays the Request Approval interface where the user can initiate the approval workflow. This link will be enabled only when applicable.
- **Cancel Approval** – This link displays the Cancel Approval interface where the user can cancel the current approval workflow. This link will be enabled only when applicable.
- **Notify** – This link will display the Notification interface where the user can send various notifications to different groups.

The Request Approval, Cancel Approval and Notify links are described in detail in the section 2.3.2.8 of this document.

2.3.2.1.1 Project State

As mentioned briefly above, information pertaining to the current state of the project for approvals and funding is displayed on the General tab. The values displayed are generated by the system depending on actions by the user as described below.

Approval

User Action	Approval Value
Some of the project's planning fields have been entered but no funding has been requested.	In Planning Phase

User Action	Approval Value
All of the required programming fields have been successfully entered, or a change has been made to an "approval required field," but the actual approval process has not been initiated.	Approval Required
The approval process has been initiated, but is not complete.	Pending Approval
One of the approvers has denied approval of the request.	Approval Denied
All users that are part of the approval cycle have approved the project. The approval cycle is complete.	Approved

Table 1 - Approval

Funding

User Action	Funding Status Value
Still in planning phase	N/A
At least one Obligation Status for a fund transaction is set to "Proposed" and none are marked as "Pending."	Proposed Obligation
At least one Obligation Status for a fund transaction is set to "Pending."	Pending Authorization
All Obligation Status fields for every fund transaction are marked as "Authorized."	All Authorized

Table 2 - Funding

A significant portion of P2S is dedicated to managing approvals, approval workflows and associated information which constitutes the need for the approval. The General tab in the Program section of P2S contains several values that require approval if changed. Changes to these values only require approval once the project has been programmed (i.e. a funding request has been approved). Prior to funding being approved for the project, no changes to particular data fields require approval.

Required approval fields on the General tab in the Program section of P2S are listed here and are outlined in the mockup shown below.

- Project Name
- STIP Item
- Project Type
- Funding Type
- Location
- Proposed Letting Date
- Project Status

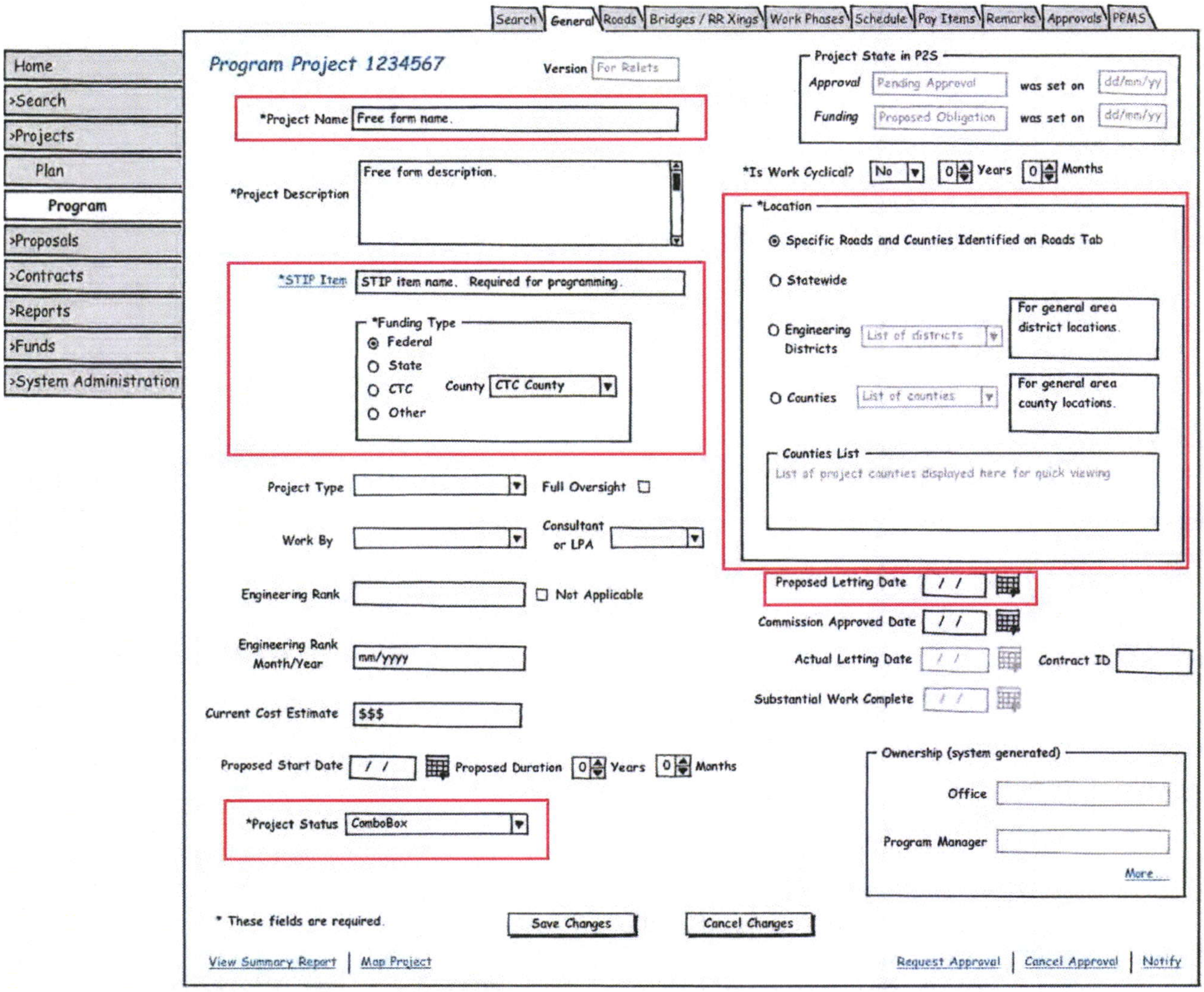


Figure 18 - Approval Required Fields

Once again, the information outlined in red above requires approval if changed once any amount of funding has been approved for the project. Upon entering the General tab, all approval required fields will be visually marked for easy identification. Should the user modify information in one of the approval required fields, the modified field and its data will change color to denote the modification. Should the user choose to initiate the approval process, this can be accomplished by selecting the Request Approval link at the bottom of the page. Refer to section2.3.2.4.5.2 for more information on when changes to a field require approval.

Note that while information pending approval is shown to those allowed to edit the project (i.e. project owner), only approved data and values are shown to other users through reports and searches. The project owner can hover over any approval required field in the General tab to see its previous value.

2.3.2.2 Roads

After entering general information about a new project, the user has the option to enter specific location information about that project on the Roads tab. Once the locations have been entered, the system will automatically query the RIMS database to associate the following detail information with each route:

- Road Name
- System Code
- National Highway System (NHS)
- Functional Class
- City
- Commission District
- Hurricane Evacuation Route
- Study Area Boundary

The following mockup shows the Roads tab as the user would see it before any location information has been entered:

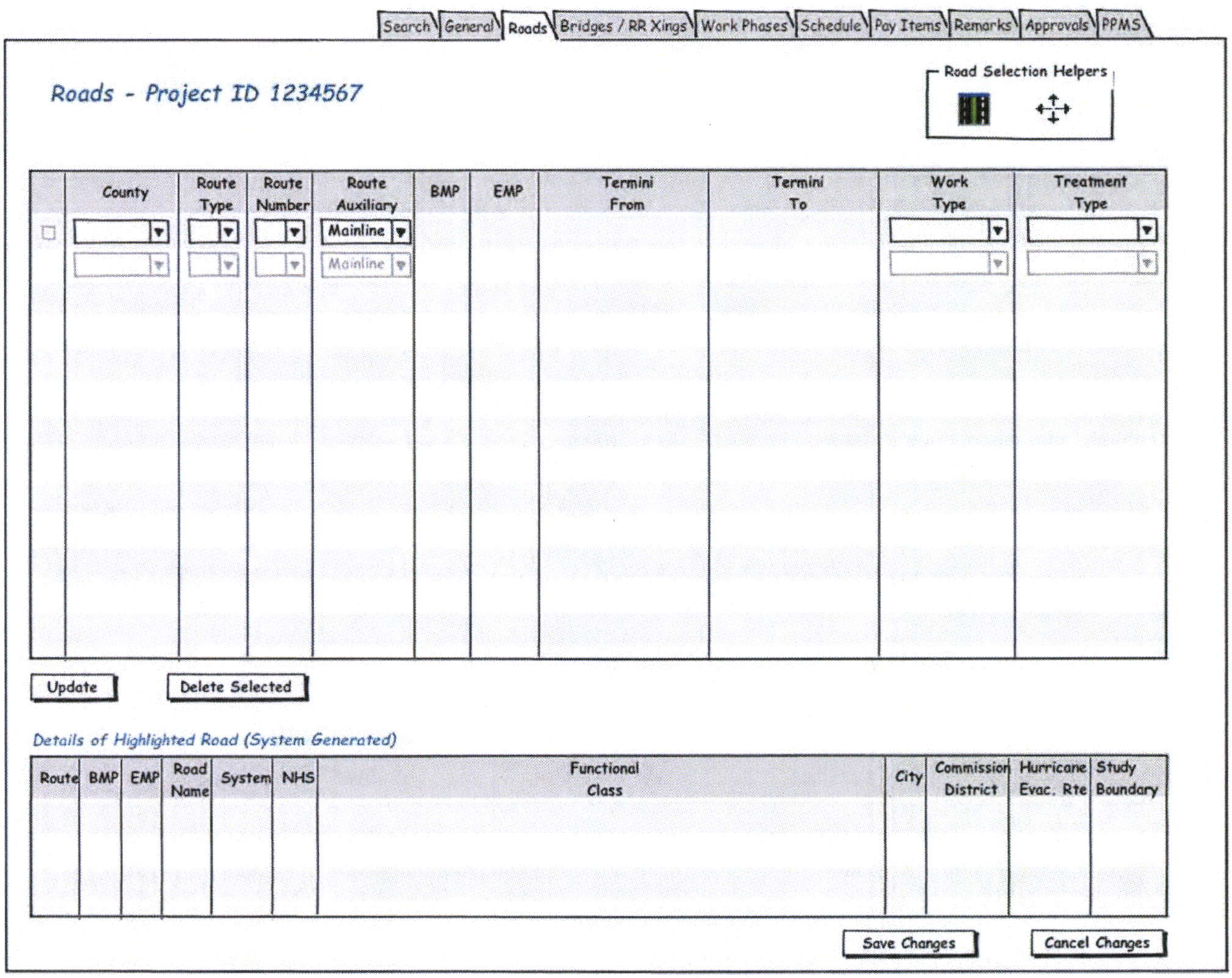


Figure 19 - Initial Roads Tab

To add a new road, the user would begin entering information into the first (enabled) row of the table. At any point after filling in the first 6 columns (County, Route Type, Route Number, Auxiliary, BMP and EMP), the user may press the Update button to see details about the road section in the table at the bottom of the screen. To add a second road, the user would begin entering information in to the second row of the Roads table, which will now be enabled. Every time the user enters a new row, the row below it (the last row in the table) will be enabled to allow for the entry of additional routes.

Details of Highlighted Route

The table at the bottom of the screen displays the System Code, National Highway System – (NHS, Yes/No), Functional Class, City, Commission District, Hurricane Evacuation Route (Yes/No), and Study Boundary (MPO or COG) for all distinct segments of the highlighted route. The information in this table is system-generated and is not editable. If the highlighted record is being edited and has not yet been saved, the user must press the **Update** button to see its details displayed.

The following defines the fields in the road entry table and all buttons on the screen:

Table Fields

County – This drop down box is a list of all valid Counties. It is a required field.

Route Type – This drop down box is a list of all valid Route Types. It is a required field.

Route Number – This drop down box is a list of all Route Numbers that exist in RIMS for the selected County and Route Type. The user may select from the list, or if the desired route number is not found in the list, the user may type in an alternate route number. See section 2.3.2.2.2 for more information about adding routes that are not found in RIMS.

Route Auxiliary – This drop down box is a list of all valid Route Auxiliary types. It is a required field. It will default to Mainline.

BMP – This field is available for the user to type in the beginning milepoint for roads. It is a required field.

EMP – This field is available for the user to type in the ending milepoint for roads. It is a required field.

Termini From – This text field is available for the user to type in a description of the project starting location on a road.

Termini To – This text field is available for the user to type in a description of the project ending location on a road.

Work Type – This drop down box is a list of all valid Work Types. This field is required.

Treatment Type – This drop down box is a list of all Treatment Types that are applicable for the selected Work Type. It will only be enabled and required if the Work Type has been set to Reconstruction, Rehabilitation or Preservation.

Buttons

Update – This button will query RIMS to retrieve details about the route that is currently being edited and display those details in the table at the bottom of the screen. The Update button will only be enabled if the county, route type, route number, route auxiliary, BMP and EMP have been entered. *Note that this button does not save route information to the project. Also note that if a route has previously been saved to the project, its details will display automatically whenever the route is highlighted by clicking on its row. The update button is only needed to show details of a route that has not yet been saved.*

Delete Selected – This button will remove from the project any checked routes in the table above it.

Save Changes – This button will save all new or modified route information to the project.

Cancel Changes – This button will revert any modified fields to their original state. It will only be enabled when the user has changed the text in a field and has not yet clicked the **Save** button.

> **NOTE:** If the project has the General Funding Type of "Federal" (General tab) and the user attempts to add a road on a Non-Federal Aid route, they will be required to enter a justification. This justification will go on the project's Remarks tab. The justification will also be part of the email sent when the project goes through the approval cycle.

2.3.2.2.1 Road Selection Helpers

Two Road Selection Helpers will be available from the Roads tab. They are the "Route Helper" (there are two versions of this helper) and the "Intersection Helper." Both will open in a new window that will allow the user to search for roads or intersections and have the selected results automatically added to the road table. The Road Selection Helpers are offered as an alternative to entering route information manually.

Route Helper for Non-Maintenance Users

Users who are not from the maintenance office will have the query options shown below in the Route Helper:

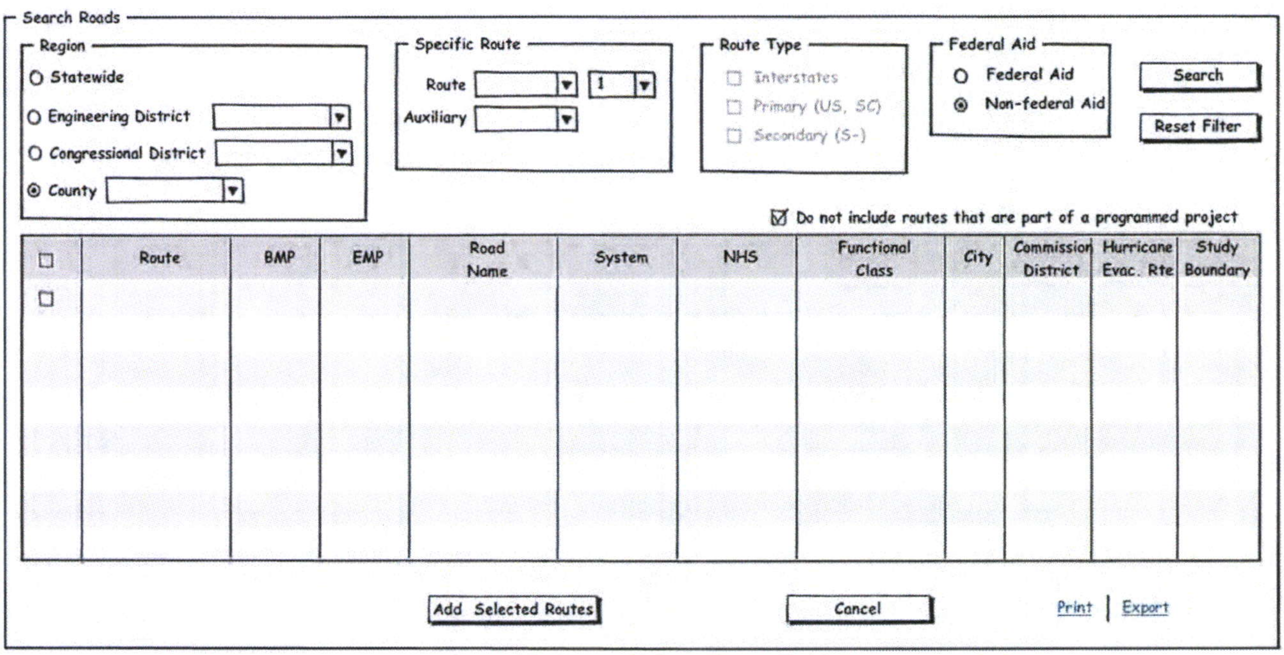


Figure 20 - Route Helper Query Fields

The query options are as follows:

Region – The user must select one out of this group of four radio buttons. The region categories include Statewide, Engineering District, Congressional District, and County. If anything but Statewide is chosen, the user must also select from the associated drop-down box.

If the user selects the County radio button, the three drop-down boxes below it will become available. The user will have the option, but is not required, to specify additional search criteria by selecting from the route type, route number, and auxiliary lists.

Route Type – The user may select any of out of this group of three checkboxes. The available route types include Interstate, Primary (US or SC), and Secondary. The checkboxes will be disabled if the user has chosen a route type from the drop-down box associated with the County search.

Federal Aid – The user must select either the Federal Aid or Non-Federal Aid radio button.

Do not include routes that are part of a programmed project – If this box is checked, routes that are part of a programmed project will be excluded from the search results.

Search – This button will display a table of search results in the lower portion of the screen. The user will have the option to select routes from the table to include in the project.

Reset – This button will clear all of the query fields, returning them to their default state.

The following mockup shows a list of search results after a query has been performed:

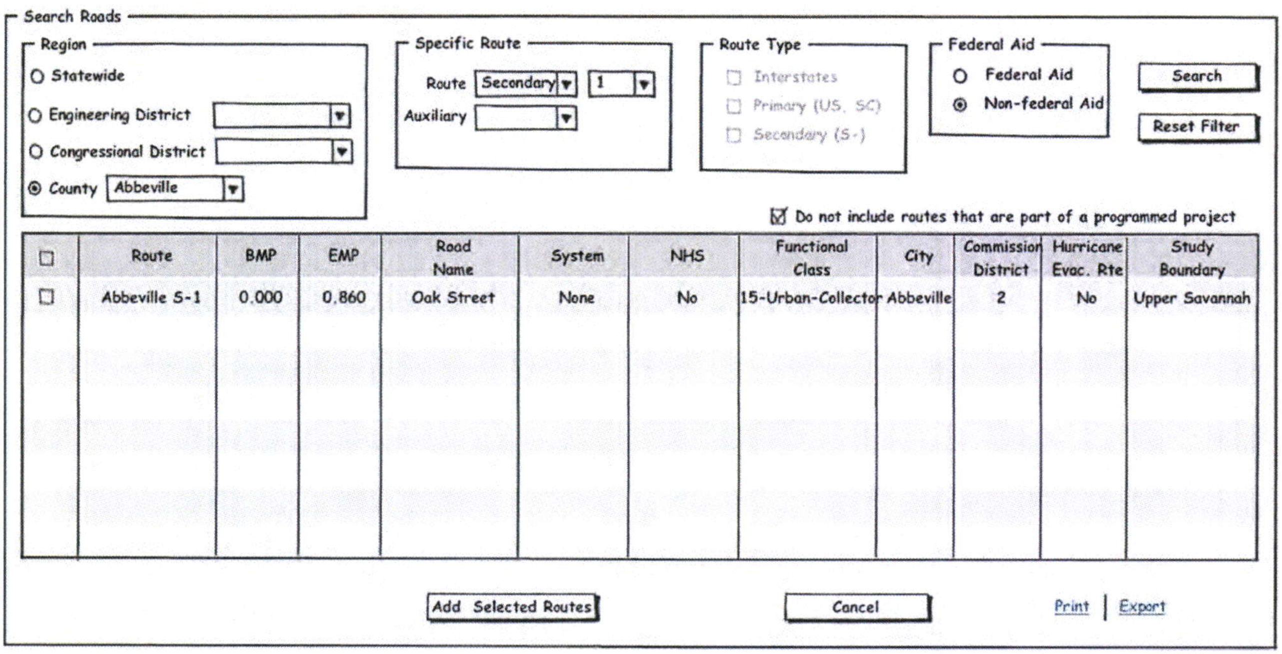


Figure 21 - Route Helper Search Results

The user may check the box next to any of the returned routes and press the Add Selected Routes button to add them to the project. Checking the box at the top of the table will select all of the routes in the list.

The functions shown below the results table include:

Cancel – This button will close the Route Helper and return the user to the Roads tab with the list of roads unchanged.

Add Selected Routes – This button will close the Route Helper and return the user to the Roads tab with the checked routes added to the table.

Print – This link will print the table of search results.

Export – This link will export the table of search results to Excel 2010 or a comma separated text file.

This version of the Route Helper performs its query against all existing routes in RIMS. There is another version of the Route Helper available to some users in the maintenance office that performs a query against three pavement management tables instead. The other Route Helper is explained below.

Route Helper for Maintenance Users

P2S will detect each user's domain login account and will do a lookup in an internal database table to determine the office of the user. If the user is from the Maintenance office and the Director of Maintenance has given approval to show the list of pavement maintenance routes, then the user will see a different interface when the Route Helper icon is activated.

The following mockup shows the results of a query performed in the Maintenance Office version of the Route Helper:

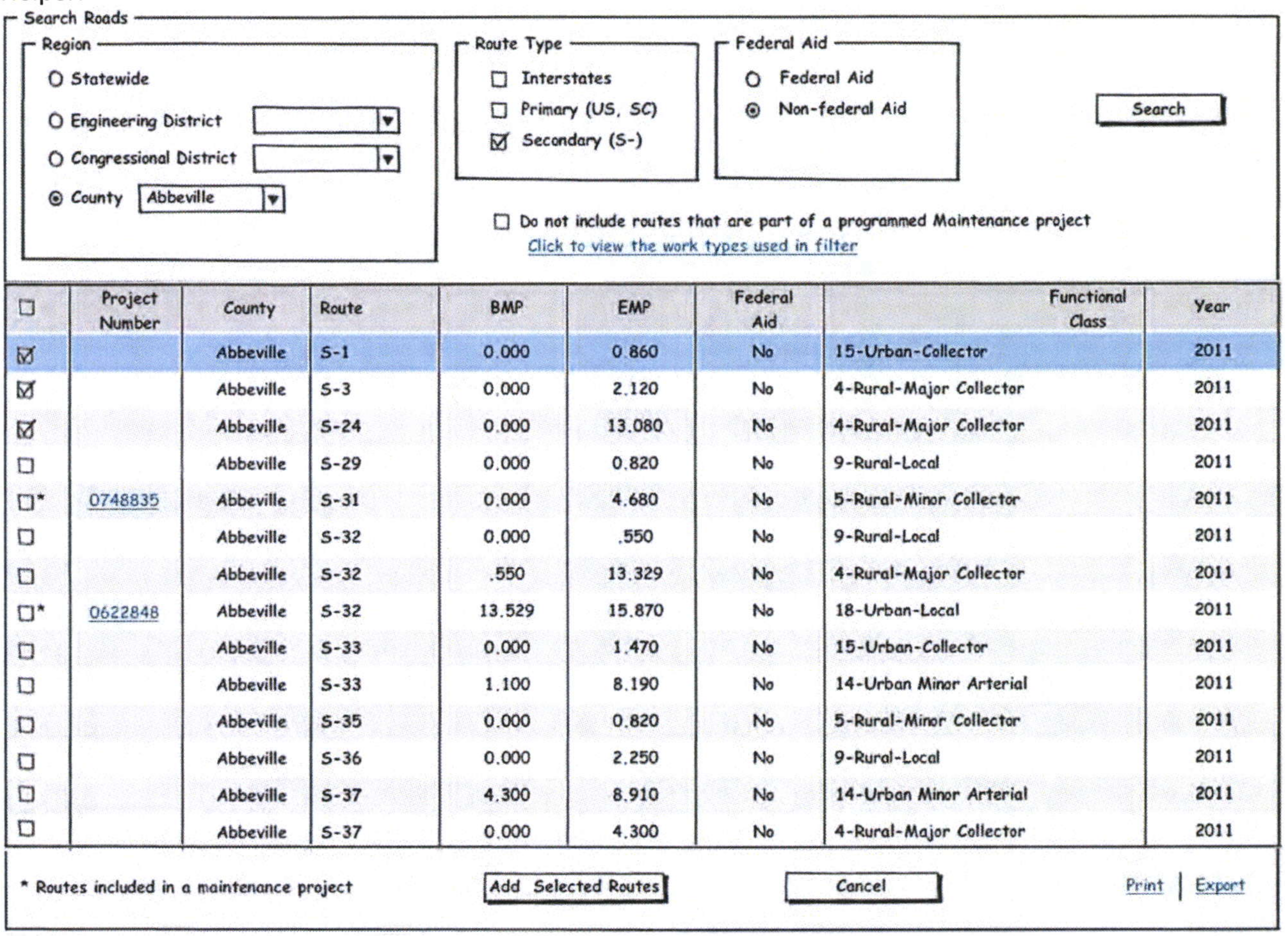


Figure 22 - Route Helper Search Results (Maintenance Office)

Most of the same functions are available in the maintenance version of the Route Helper that are available in the non- maintenance version. Only the differences are highlighted below:

County – This radio button is only associated with one drop down box for selecting from a list of counties. Additional route type, route number, and auxiliary drop-downs are not provided.

Do not include routes that are part of a programmed maintenance project – If this box is checked, programmed maintenance projects will be excluded from the results. If this box is unchecked, programmed maintenance projects will be marked by an asterisks and their project number will be displayed as a hyperlink. The user may click on the hyperlink to pop-up a window for the selected project with information from that project's Route tab page.

Click to view the work types used in the filter – This link will open a small box that lists the criteria used to determine which work types are considered maintenance projects. Currently, work types that are considered maintenance are Reconstruction, Rehabilitation and Preservation. The system administrator can add to or delete from this list, when necessary.

The following mockup shows the results of selecting the three routes shown in Figure 4 and pressing the Add Selected Routes button:

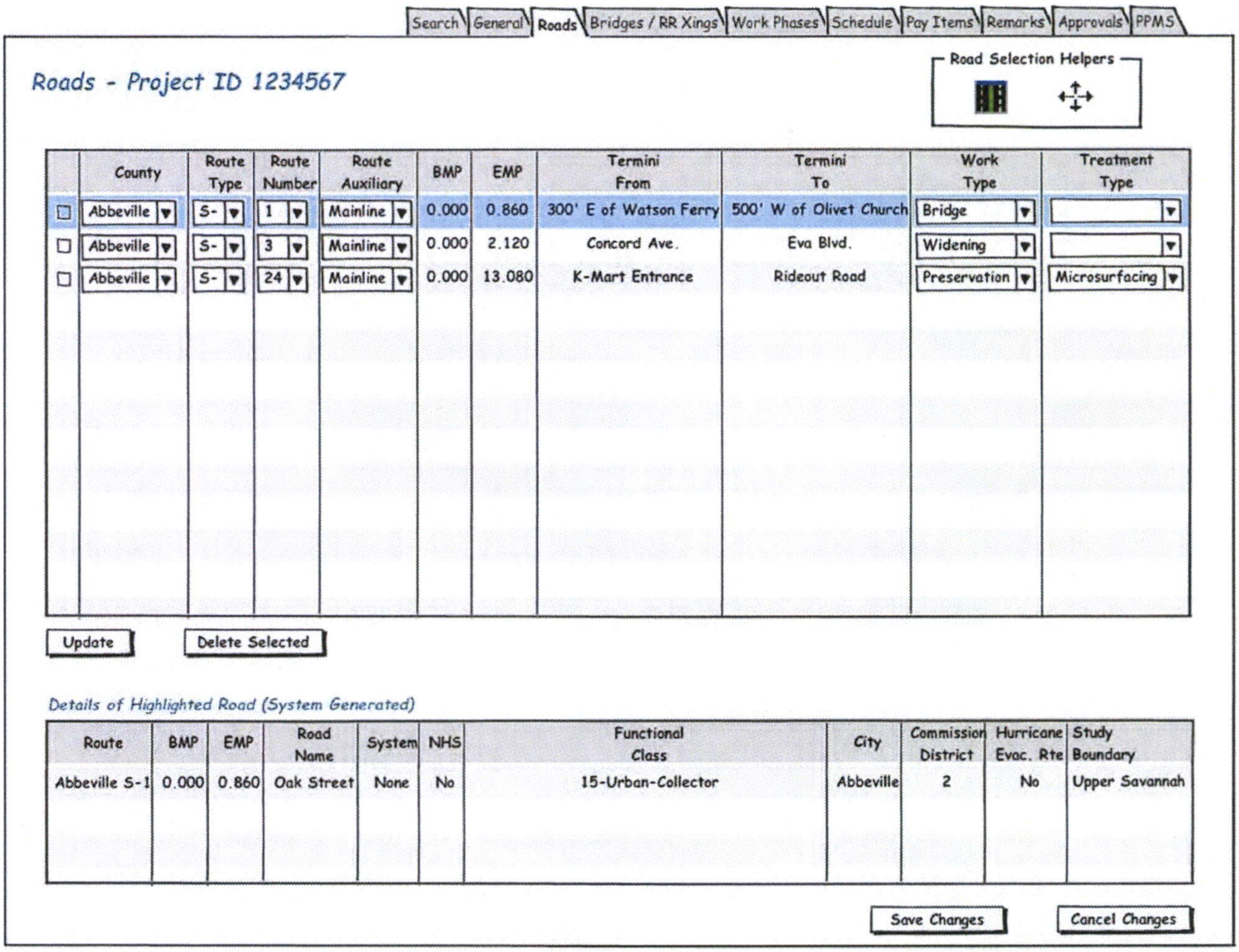


Figure 23 - Roads tab after use of Route Helper

The user is returned to the Roads tab with the selected routes added. The first six fields are populated by the Route Helper. The Termini From, Termini To, Work Type and Treatment Type fields are left empty for the user to fill in manually (example text is shown).

The results on this screen will be the same whether the routes have been added to the table by the Route Helper, the Maintenance version of the Route Helper, or the Intersection Helper (note that if the Intersection Helper is used, BMP and EMP will be the same number because intersections are stored as point features).

<u>Intersection Helper</u>

The Intersection Helper will assist the user in finding all the intersections along a selected route. The following mockup shows the Intersection Helper after a query has been performed:

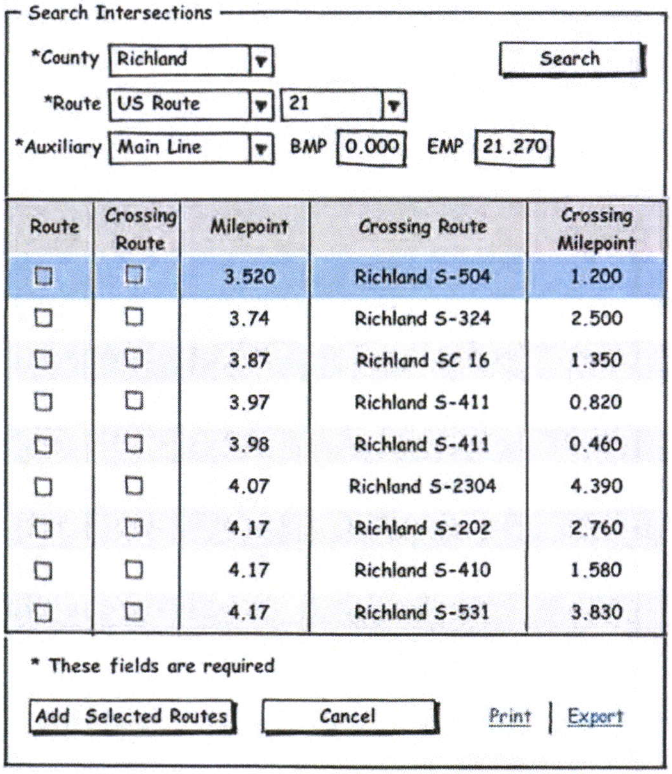


Figure 24 - Intersection Helper Search Results

The query options are as follows:

County – This drop-down list of counties is required.

Route – This set of two down-down lists: route types and route numbers, are both required.

Auxiliary – This drop-down list of auxiliary types is required. It will default to *Mainline*.

BMP – This field will accept a beginning milepoint value. It is not required.

EMP – This field will accept an ending milepoint value. It is not required.

Search – This button will display a table of search results in the lower portion of the screen.

Two checkboxes will be displayed in the table of search results. The first checkbox refers to the location of the route that was used as the query input. The second checkbox refers to the location of the crossing route.
The functions shown below the results table include:

Add Selected Routes – This button will close the Intersection Helper and return the user to the Roads tab with the checked routes added to the list.

Cancel – This button will close the Intersection Helper and return the user to the Roads tab with the list of roads unchanged.

Print – This link will print the table of search results.

Export – This link will export the table of search results to Excel 2010.

2.3.2.2.2 RIMS Integration

PMG will provide validation for the routes entered for a project. Route validation is essential to project overlap detection and reporting. This validation will be accomplished using RIMS information and will occur automatically when a route entry is saved or when the **Update** button is selected. Route validation items will include:

- Route existence
- Location milepoint termini confirmation
- Route dominant/subordinate identification and management

P2S will update the RIMS Route Modification module to allow for the update of project locations and milepoints in the project programming database. These updates will occur as a result of a RIMS modification to reflect milepoint changes on routes. Examples of route changes that cause milepoints to change are the lengthening or shortening of a road from any point on that road. An example of the entire location changing is when a route is re-designated. It is imperative that the project programming database be kept current with RIMS routes and milepoints.

If a certain route is unable to be validated by RIMS, the user will still be allowed to include the route in the project. For example, the RIMS database does not have a complete collection of local roads, so if the user selects "L-" as the route type, the route number may not be found in the database. Or, for example, the project might be to build an entirely new road. To accommodate situations such as these, the Route Number drop-down box will be configured so that the user can select a number from the list, or key-in their own number.

If the user attempts to add a route that does not exist in RIMS, a warning message will pop up stating that this is the case, and asking if they want to continue. If the user decides to go ahead and save the route to the project, the route's row will be marked with an asterisk. The asterisk indicates that "this route does not currently exist."

> **Note:** If a road is added, modified or deleted *after* the Let Date, the user will be required to enter a justification. This justification will go on the project's Remarks tab. The justification will also be part of the email sent when the project goes through the approval cycle.

2.3.2.3 Bridges/RR Xings Tab

The Bridges/RR Xings tab allows the user to select bridges and/or railroad crossings to include in the project. They will be entered one at a time with the ability to view high level route information if desired. The following mockup shows the Bridge/RR Xings tab as the user would see it before any information has been entered:

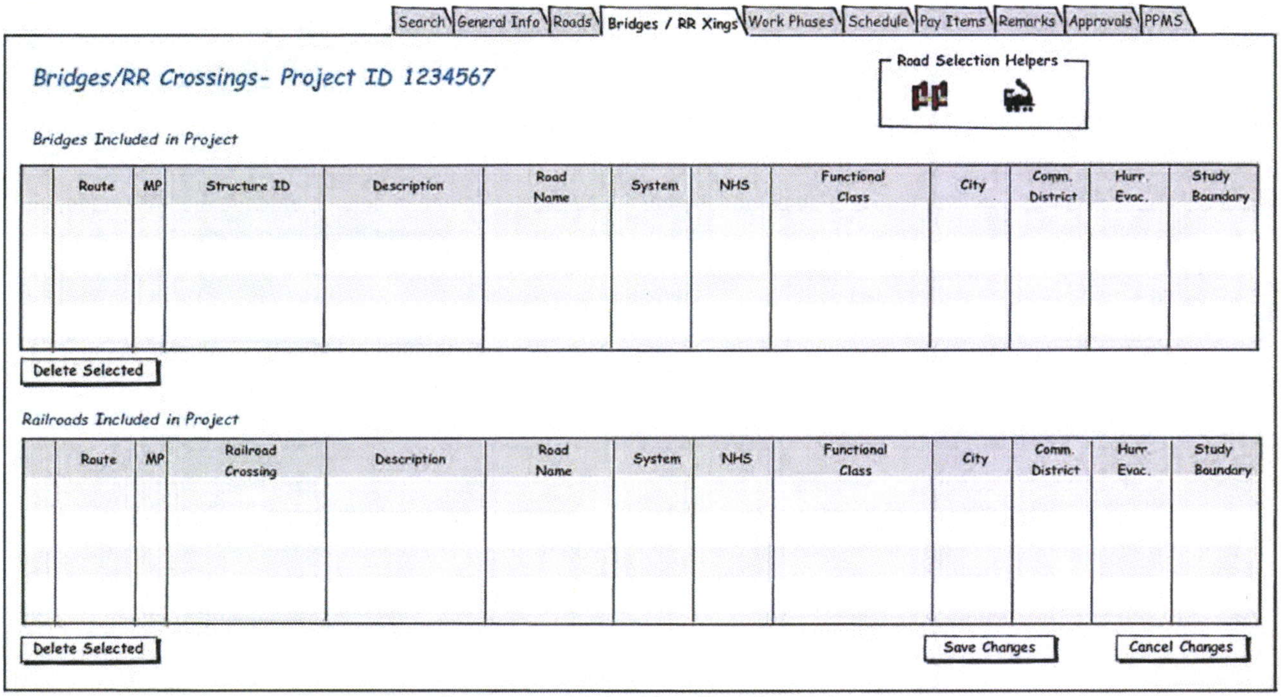


Figure 25 - Initial Bridges/RR Xings Tab

To add a new record, the user would begin entering information into the first (enabled) row of the table. At any point after selecting a structure or railroad crossing number, the user may click the **Update** button to see details in the table at the bottom of the screen. To add a second row, the user would begin entering information in to the second row of the table, which will now be enabled. Every time the user enters a new row, the row below it (the last row in the table) will be enabled to allow for the entry of additional bridges and/or railroad crossings.

Details of Highlighted Bridge/RR Xing

The table at the bottom of the screen displays the System Code, National Highway System – (NHS, Yes/No), Functional Class, City, Commission District, Hurricane Evacuation Route (Yes/No), and Study Boundary (MPO or COG) for the selected bridge or railroad crossing. The information in this table is system-generated and is not editable. The user may highlight one row at a time by clicking on it. If the highlighted record is being edited and has not yet been saved, the user must press the **Update** button to see its details displayed.

Table Fields

County – This drop down box is a list of all valid Counties. It is a required field.

Route Type – This drop down box is a list of all valid Route Types. It is a required field.

Route Number – This drop down box is a list of all Route Numbers that exist in RIMS for the selected County and Route Type. The user may select from the list, or if the desired route number is not found in the list, the user may type in an alternate route number. See section 2.3.2.2.2 for more information about adding routes that are not found in RIMS.

Route Auxiliary – This drop down box is a list of all valid Route Auxiliary types. It is a required field. It will default to Mainline.

Milepoint – This is a read-only field and will contain the milepoint of the selected Structure or Railroad Crossing.

Structure Number – This drop down box is used when entering bridge information. It is a list of all of the structure numbers that exist along the selected route. It is filtered by County and further filtered by Route Type and Route Number. The user may also key-in a structure number for new bridges.

Railroad Crossing Number – This drop down box is a list of all of the railroad crossing numbers that exist along the selected route. It is filtered by County and further filtered by Route Type and Route Number. The user may also key-in a railroad crossing number for new railroad crossings.

Description – This field will contain the Bridge Crossing Name when a Bridge is selected. It will contain the Railroad Crossing Line and Railroad Crossing milepost when a railroad is selected. This field is read-only unless the bridge or railroad is new.

Work Type – This drop down box is a list of all valid Work Types. This field is required.

Buttons

Update – This button will query RIMS to retrieve details about the row that is currently being edited and display those details in the table at the bottom of the screen. The **Update** button will only be enabled if a structure or railroad crossing number have been selected. *Note that this button does not save information to the project. Also note that if a record has previously been saved to the project, its details will display automatically whenever the record is highlighted by clicking on its row. The update button is only needed to show details of a record that has not yet been saved.*

Delete Selected – This button will remove from the project any checked bridges or railroad crossings.

Save Changes – This button will save all new or modified information to the project.

Cancel Changes – This button will revert any modified fields to their original state. It will only be enabled when the user has changed the text in a field and has not yet selected the **Save** button.

> **NOTE**: If the project has the General Funding Type of "Federal" (General tab) and the user attempts to add a bridge or railroad crossing on a Non-Federal Aid route, they will be required to enter a justification. This justification will go on the project's Remarks tab. The justification will also be part of the email sent when the project goes through the approval cycle.

2.3.2.3.1 Location Selection Helpers

Two location selection helpers will be available from the Bridges/RR Xings tab. They are the "Bridge Helper" and the "Railroad Crossing Helper." Their purpose is to aid the user in choosing bridges or railroad crossings to include in a project as opposed to having to manually key them in. The location selection helpers appear in a group at the top of the Bridges/RR Xings tab.

Bridge Helper

The Bridge Helper will assist the user in finding all bridges along a selected route. The following mockup shows the Bridge Helper after a query has been performed:

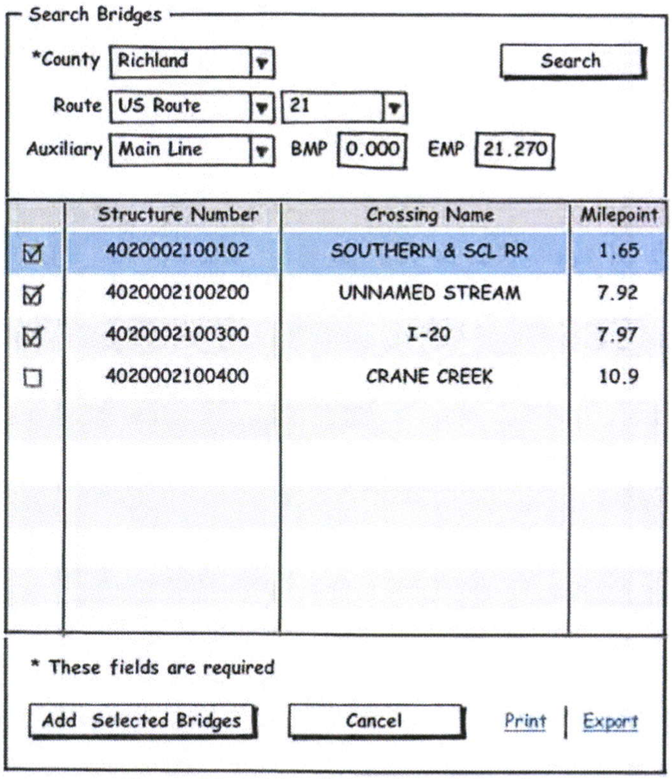


Figure 26 - Bridge Helper Search Results

Similar to the Intersection Helper, the checkbox displayed by the Bridge Helper allows the user to select the location of the bridge for that row. The county is the only required search input. If the Add Selected Bridges button is pressed, the bridges will be added to the Bridges and Railroads table.

Railroad Helper

The Railroad Helper will assist the user in finding all the railroad crossings along a selected route. The following mockup shows the Railroad Helper after a query has been performed:

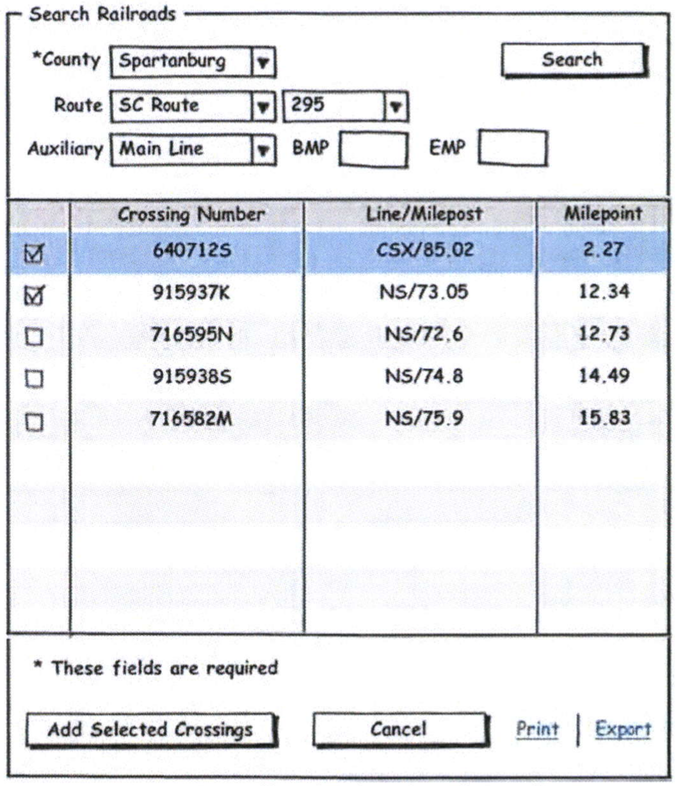


Figure 27- Railroad Helper Search Results

Like the Bridge Helper, the county is the only required search input. If the **Add Selected Crossings** button is pressed, the information from the checked rows will be added to the first eight columns of the Bridges and Railroads table.

The following mockup shows the Bridges/RR Xings tab after use of the Bridge Helper and the Railroad Helper:

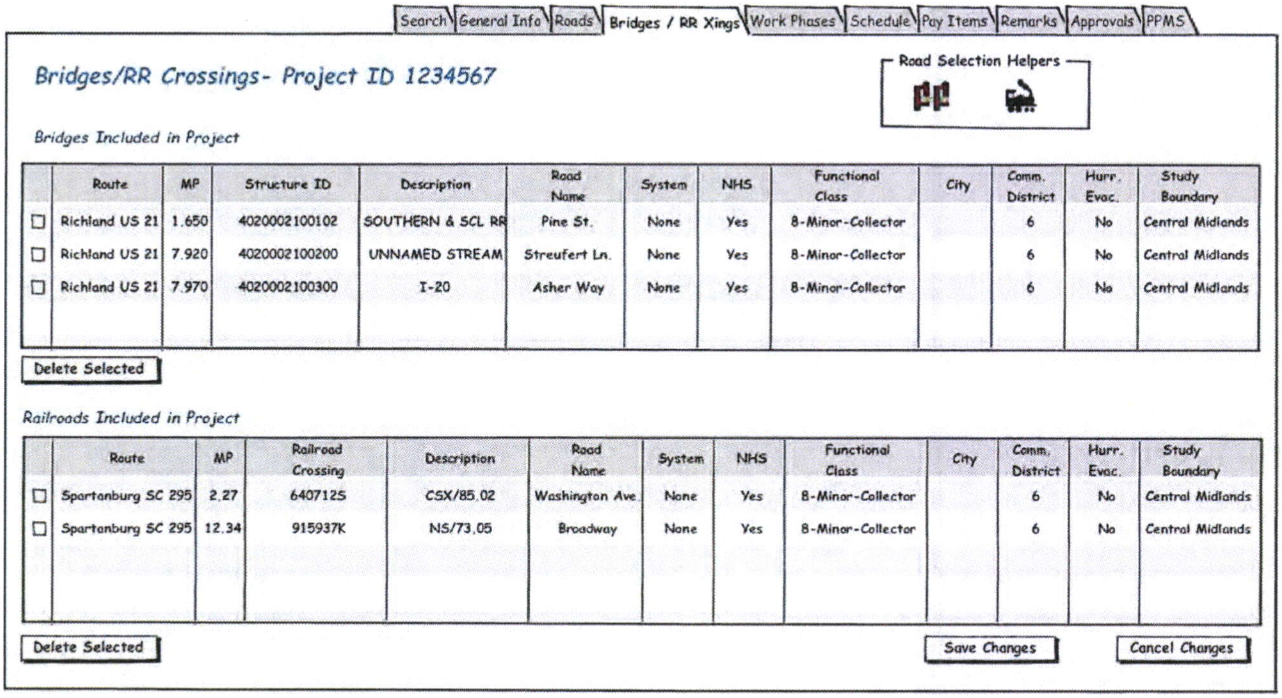


Figure 28 - Roads tab after use of Bridge Helper and Railroad Helper

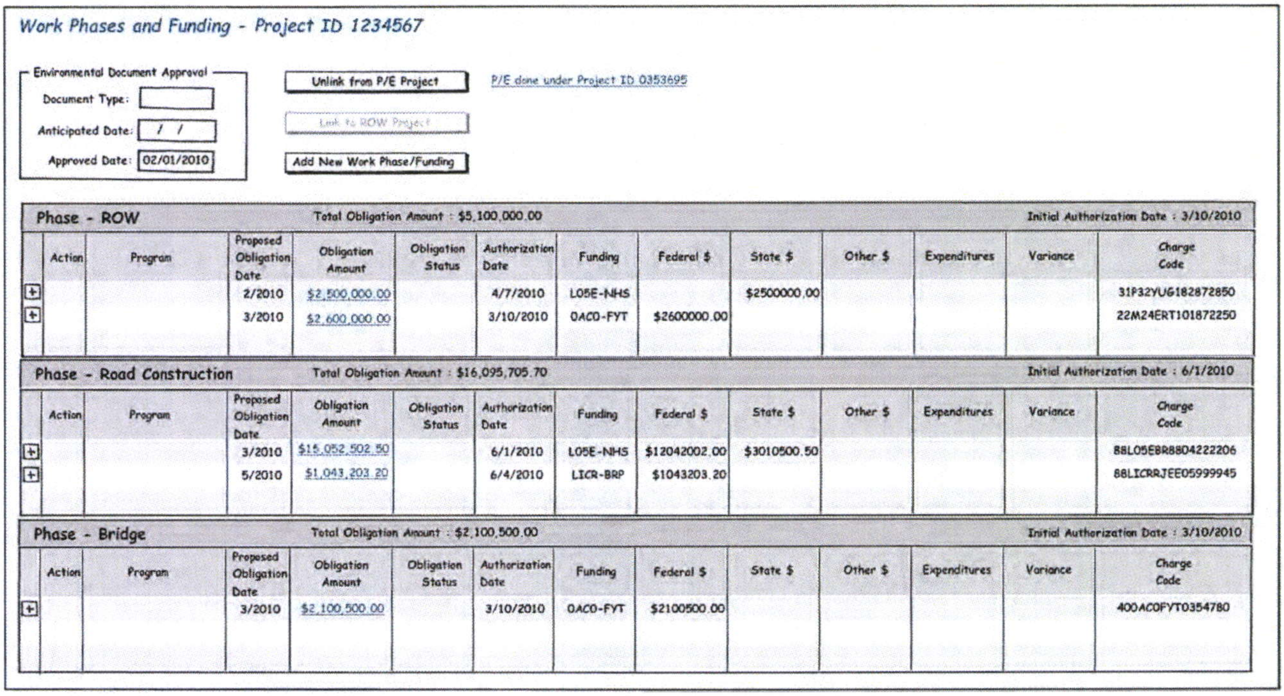
All columns, with the exception of the Work Type, are automatically populated by the Bridge and Railroad Helpers. Note that the Bridge helper puts the Crossing Name into the Description field, and it does not use the Railroad Crossing Number field. Note also that the Railroad helper puts the Line/Milepost into the Description field, and it does not use the Structure Number field.

Note: If a bridge or railroad crossing is added, modified or deleted *after* the Let Date, the user will be required to enter a justification. This justification will go on the project's Remarks tab. The justification will also be part of the email sent when the project goes through the approval cycle.

2.3.2.4 Work Phases

The Work Phases and Funding tab within P2S will provide the ability to view a summary of the work phases and funding for a given project. Additionally, for certain users it will also provide access to the Edit Work Phase and Funding interface from which the user has the ability to define the work phases, define their associated funding transactions and authorize funding for each transaction. In order for a user to be able to associate a work phase with a project and to define a funding transaction for the work phase the user must be granted the "Ability to Program Projects" user permission from within the User Maintenance System Admin interface. In order for a user to be able to authorize funding for a work phase transaction the user must be granted the "Ability to Obligate Funds" user permission.

The Work Phases tab provides a summary view of all work phases and funding associated with a project. The following is a mockup of the Work Phases and Funding tab for a project that has already had multiple work phases and funding transactions assigned to it:



Phase - ROW | Total Obligation Amount : $5,100,000.00 | Initial Authorization Date : 3/10/2010

	Action	Program	Proposed Obligation Date	Obligation Amount	Obligation Status	Authorization Date	Funding	Federal $	State $	Other $	Expenditures	Variance	Charge Code
+			2/2010	$2,500,000.00		4/7/2010	L05E-NHS		$2500000.00				31P32YUG182872850
+			3/2010	$2,600,000.00		3/10/2010	OACO-FYT	$2600000.00					22M24ERT101872250

Phase - Road Construction | Total Obligation Amount : $16,095,705.70 | Initial Authorization Date : 6/1/2010

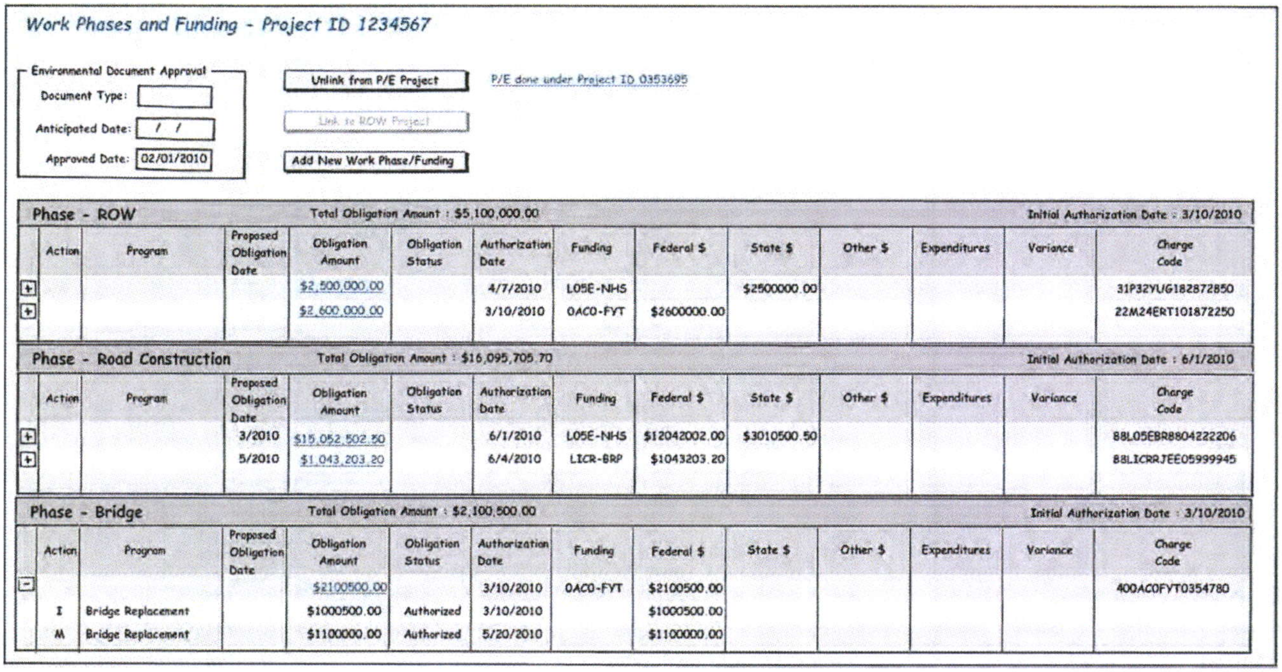
	Action	Program	Proposed Obligation Date	Obligation Amount	Obligation Status	Authorization Date	Funding	Federal $	State $	Other $	Expenditures	Variance	Charge Code
+			3/2010	$15,052,502.50		6/1/2010	L05E-NHS	$12042002.00	$3010500.50				88L05EBR8804222206
+			5/2010	$1,043,203.20		6/4/2010	LICR-BRP	$1043203.20					88LICRRJEE05999945

Phase - Bridge | Total Obligation Amount : $2,100,500.00 | Initial Authorization Date : 3/10/2010

	Action	Program	Proposed Obligation Date	Obligation Amount	Obligation Status	Authorization Date	Funding	Federal $	State $	Other $	Expenditures	Variance	Charge Code
+			3/2010	$2,100,500.00		3/10/2010	OACO-FYT	$2100500.00					400ACOFYT0354780

Figure 29 - Work Phase Funding

Within the Work Phases and Funding tab the funding transactions are grouped by the Work Phase. The order in which the Work Phases are displayed in this interface is based on the work phase display order as defined in the Work Phases code list. Next to each Work Phase header record is the Total Obligation Amount and the earliest Authorization Date. If no funding has been authorized for the Work Phase, then the earliest Proposed Obligation Date is specified. Within each Work Phase summation entries are displayed for each funding source. A user may expand a Work Phase Funding Source entry to see the individual funding transactions within the entry by clicking on the "+" located at the left of each entry. The following mockup shows the funding details for the first Funding Source entry in the Bridge Work Phase.


Work Phases and Funding - Project ID 1234567

Environmental Document Approval
Document Type:
Anticipated Date: / /
Approved Date: 02/01/2010

Unlink from P/E Project
P/E done under Project ID 0353695
Link to ROW Project
Add New Work Phase/Funding

Phase - ROW | Total Obligation Amount : $5,100,000.00 | Initial Authorization Date : 3/10/2010

	Action	Program	Proposed Obligation Date	Obligation Amount	Obligation Status	Authorization Date	Funding	Federal $	State $	Other $	Expenditures	Variance	Charge Code
+				$2,500,000.00		4/7/2010	L05E-NHS		$2500000.00				31P32YUG182872850
+				$2,600,000.00		3/10/2010	OACO-FYT	$2600000.00					22M24ERT101872250

Phase - Road Construction | Total Obligation Amount : $16,095,705.70 | Initial Authorization Date : 6/1/2010

	Action	Program	Proposed Obligation Date	Obligation Amount	Obligation Status	Authorization Date	Funding	Federal $	State $	Other $	Expenditures	Variance	Charge Code
+			3/2010	$15,052,502.50		6/1/2010	L05E-NHS	$12042002.00	$3010500.50				88L05EBR8804222206
+			5/2010	$1,043,203.20		6/4/2010	LICR-BRP	$1043203.20					88LICRRJEE05999945

Phase - Bridge | Total Obligation Amount : $2,100,500.00 | Initial Authorization Date : 3/10/2010

	Action	Program	Proposed Obligation Date	Obligation Amount	Obligation Status	Authorization Date	Funding	Federal $	State $	Other $	Expenditures	Variance	Charge Code
-				$2100500.00		3/10/2010	OACO-FYT	$2100500.00					400ACOFYT0354780
	I	Bridge Replacement		$1000500.00	Authorized	3/10/2010		$1000500.00					
	M	Bridge Replacement		$1100000.00	Authorized	5/20/2010		$1100000.00					

An **Environmental Document Approval** group box is located at the top of the interface. The fields in this group box are as follows.

- **Document Type** – This is the type of Environmental document needed on the project.
- **Anticipated Date** – This is the anticipated date of approval for the project's Environmental Document. This date is display only.
- **Approved Date** – This is the approval date of the project's Environmental Document. This date is display only.

A nightly process will be created as part of the P2S system that will query the Primavera database. Information obtained by this nightly process will include the Document Type, and the Anticipated Date and End Date for each project's Environmental Document approval. Brief details on this process can be found in the 3.2.9 section of this design document.

The following defines the fields shown for each Work Phase Funding Source entry.

- **Action** – This is the action associated with the work phase funding transaction. This field has an associated code list as defined in the LUAction code list table. Since this field applies to the funding transaction level records, it will be empty at the summary level.
- **Program**– This is the Program for the funding transaction. This field has an associated code list as defined in the LUProgram code list table. Since this field applies to the funding transaction level records, it will be empty at the summary level.
- **Proposed Obligation Date** – This is the month and year of the proposed date when funding is to be obligated for the transaction. This field will display using the format "mm/yyyy". This field applies to the funding transaction level records.

  At the transaction level, once funds have been obligated for the transaction and an authorization date has been assigned, the Proposed Obligation Date will display as empty for the transaction.

At the summary level, if there are one or more funding transactions with an Obligation Status of Proposed, OM Notified or Pending then the Proposed Obligation Date will display the earliest date from these transactions. If no transactions exist with an Obligation Status of Proposed, OM Notified or Pending then the Proposed Obligation Date will display as empty. A date in the Proposed Obligation Date field in the summary row will thus signal the user that there are one or more Proposed or Pending funding transactions for the funding source.

- **Obligation Amount** – At the transaction level, this is the amount of money to be obligated for the work phase funding transaction. At the summary level, this is the total amount of money to be obligated for all of the work phase's funding transactions. If the user is granted the "Ability to Program Projects" or the "Ability to Obligate Funds" user permission, then the Obligation Amount will display as a hyperlink. When the hyperlink is clicked, the Edit Work Phase and Funding Interface will be displayed to allow the user to edit the work phase funding information.
- **Obligation Status** – This is the status of the obligation process for the funding transaction. This field has an associated code list as defined in the LUObligationStatus code list table. Since this field applies to the funding transaction level records, it will be empty at the summary level. The values for this field are defined by user actions as follows:

User Action	Obligation Status Value
The PM has created a new transaction or modified an existing proposed transaction.	Proposed
The project is approved and the system has automatically sent a notification to OM, but OM has not reviewed the transaction.	OM Notified
OM has been notified and is reviewing the transactions marked as "OM Notified". OM manually changes the obligation status to "Pending".	Pending
OM has received authorization and manually changes the obligation status to "Authorized".	Authorized

Table 3 - Workphase Funding Obligation Status Values

When a project is approved the system will check to see if any "current" proposed funding transactions need authorization. A "current" proposed funding transaction is defined to be any funding transaction with an Obligation Status of "Proposed" and a Proposed Obligation Date within a defined time period from the current computer system date. This defined time period will be configurable and will be stored in the P2S configuration table. If the project has at least one "current" proposed funding transaction which requires authorization then the system will automatically notify OM. At this point the Obligation Status will be set to "OM Notified" for all "current" proposed funding transactions. The Obligation Status will remain as "Proposed" for all proposed funding transactions which have Proposed Obligation Dates in the future.
To account for the fact that there may be one or more funding transactions with a Proposed Obligation Date that is in the future, P2S will run a nightly process that will review each project and look for the following criteria:

- Project is Approved
- Funding Source Transaction has an Obligation Status of Proposed

- Funding Source Transaction has a Proposed Obligation Date within the defined time period from the current computer system date

The nightly process will send out automatic notification messages to OM for each project that meets the above criteria. In addition, the Obligation Status for each funding transaction meeting the above criteria will have its Obligation Status set to "OM Notified."

As an example, a PM sets up PE, RW and CON proposed funding source transactions, where the PE has a date within the current month; RW has a date a year in the future and CON has a date two years in the future. When the project is approved all three of these funding sources are also approved, however OM will only be notified that PE funding requires authorization. The nightly process will a year later notify OM for the RW funding transaction and will two years later notify OM for the CON funding transaction.

- **Authorization Date** – At the transaction level, this is the date when the funding is authorized. At the summary level, if funds have been authorized for at least one of the transactions then the date displayed is the earliest Authorization Date from the transactions.
- **Funding** – This is the funding source for the work phase. It is comprised of both the Funding Category and the Funding Code, using the format: <Funding Code> - <Funding Category>. This field will only contain a value at the summary level.
- **Federal $** – This is the amount of money authorized for the work phase that comes from Federal sources. At the summary level, this will be the sum of the Federal funding for all transactions.
- **State $** – This is the amount of money authorized for the work phase that comes from State sources. At the summary level, this will be the sum of the State funding for all transactions.
- **Other $** – This is the amount of money authorized for the work phase that comes from Other sources. At the summary level, this will be the sum of the Other funding for all transactions.
- **Expenditures** – This is the amount of expenditures to date for the work phase. At the summary level, this will be the sum of the expenditures for all transactions. This value will be displayed as a hyperlink. When the user clicks on the hyperlink a detailed expenditures report will be displayed. Details on this report are defined in the Detailed Expenditures Report section of this document.
- **Variance** – This is the amount of authorized funds not spent. At the transaction level, this value is calculated as: <Authorized Amount> - <Expenditures>. At the summary level, this value is the sum of the Variance values for all transactions.
- **Charge Code** – This is the charge code for the work phase. This field will only contain a value at the summary level.

Three buttons are located at the top of the interface. These buttons will only be available for users who have been given the permission to Program a project. For all other users these buttons will not be displayed.

- **Add New Work Phase/Funding** – This button allows a new work phase funding source to be added. When this button is selected, the Edit Work Phase and Funding Interface will be displayed with all fields in the interface blank to allow the user to define the new work phase funding source. This button will only be available if the user has been granted the "Program a Project" permission.
- **Link to P/E Project** or **Unlink from P/E Project** – This button will only be available in the interface if there is currently no P/E work phase defined for the project and there is one or more construction type work phases defined for the project. If either of these conditions is not met, the button will be disabled. This button will contain either the text "Link to P/E Project" or the text "Unlink from P/E Project." When the button contains the text "Link to P/E Project" then the button allows the user to link a P/E work phase from another project to the current project. If a P/E work phase from another

project is already linked to the project then the button will contain the text "Unlink from P/E Project" and allows the user to remove the link.

When a P/E work phase from another project is linked to the current project then a link will be displayed next to the P/E button. This link will be available for all users and the text of the link will be of the format "P/E done under Project ID #1234567." When the link is selected, the Detailed Report for the linked P/E work phase project will be displayed.

- **Link to ROW Project** or **Unlink from ROW Project** – This button will only be available in the interface if there is currently no ROW work phase defined for the project and there is one or more construction type work phases defined for the project. If either of these conditions is not met, then the button will be disabled. This button will contain either the text "Link to ROW Project" or the text "Unlink from ROW Project." When the button contains the text "Link to ROW Project" then the button allows the user to link a ROW work phase from another project to the current project. If a ROW work phase from another project is already linked to the project then the button will contain the text "Unlink from ROW Project" and allows the user to remove the link.

  When a ROW work phase from another project is linked to the current project then a link will be displayed next to the ROW button. This link will be available for all users and the text of the link will be of the format "ROW done under Project ID #1234567." When the link is selected, the Detailed Report for the linked ROW work phase project will be displayed.

The following is a mockup that shows the interface displayed if the user selects the **Link to P/E Work Phase** button.

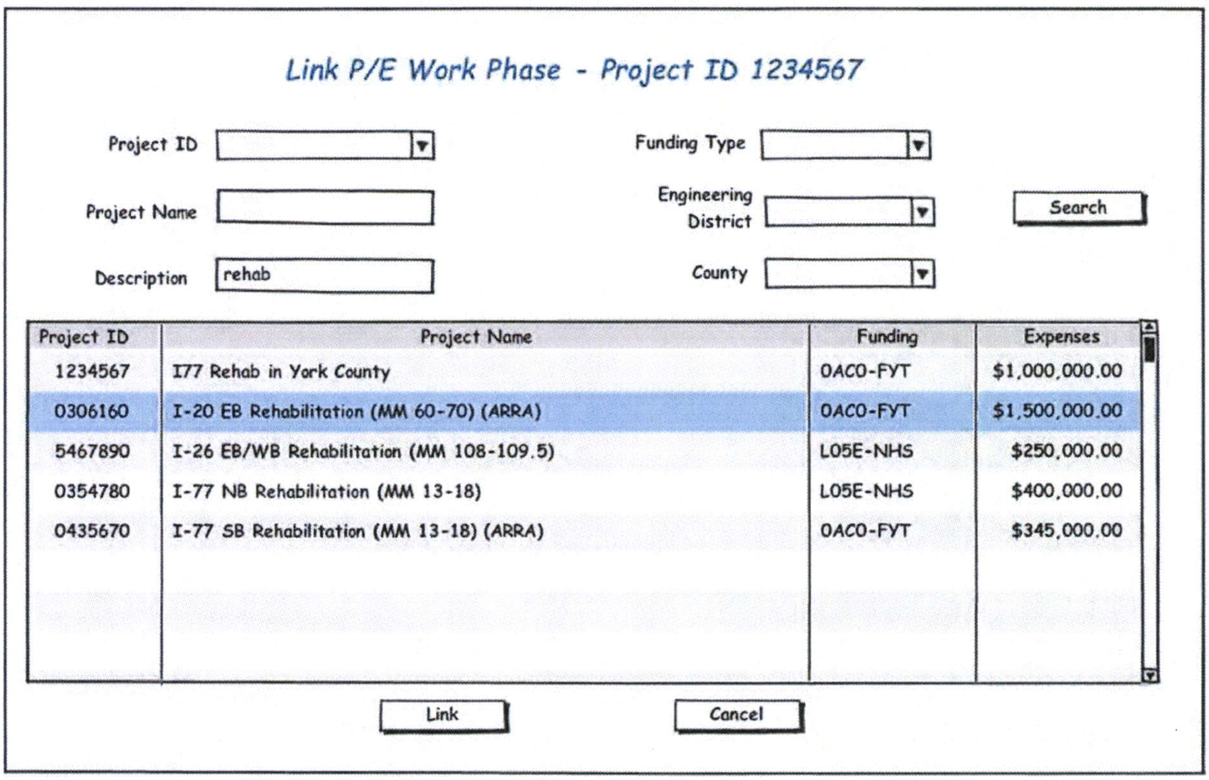


Figure 30 - Link to P/E or ROW Work Phase Interface

The following fields are available for filtering the P/E (or ROW) projects to be returned:

- **Project ID** - This is a drop down list of Project IDs.
- **Project Name** – This is a free form key-in field. A wild card search will be executed on whatever text is entered.
- **Description** – This is a free form key-in field. A wild card search will be executed on whatever text is entered. For example, if the user enters only the text "Rehab," any project with the word Rehab will be shown in the results (example given in mockup above).
- **Funding Type** – This is a drop down list containing the funding types available for selection.
- **Engineering District** – This is a drop down list containing the names of the Engineering Districts.
- **County** – This is a drop down list containing the names and numbers of all counties in South Carolina.

The following defines the buttons on this interface:

- **Link** – This button allows the user to link a P/E or ROW work phase from the selected project with the current project. When selected, the highlighted project from the interface is linked as the P/E or ROW work phase for the current project.
- **Cancel** – This button allows the user to cancel out of the interface without associating a P/E or ROW work phase from another project to the current project.

If a user has been granted the "Ability to Program Projects" permission and there are no work phase funding sources assigned to a project, then upon selection of the Work Phases tab the user will be presented initially with an empty version of the Edit Work Phase interface. From this interface, the user will define the first work phase and the associated funding source to the project. The following is a mockup of this interface. Details on this interface are provided in the Edit Work Phase and Funding Interface section of this document.

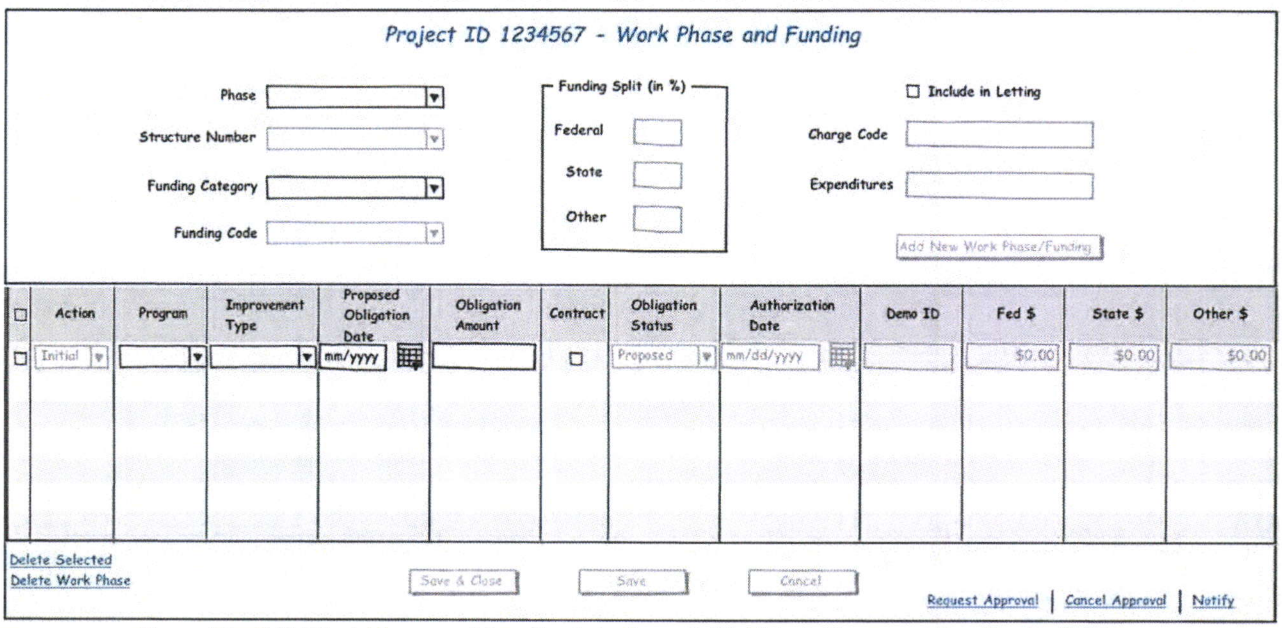


Figure 31 - Edit Work Phase and Funding Interface - Initial Work Phase and Funding Definition

If a user has been granted the "Ability to Obligate Funds" permission then the user will be notified via email when a project has been approved and is ready to have funding obligated to it. A link will be provided within the email that when selected, will take the user to the Work Phases tab for the referenced project. Within the Work Phases tab each work phase funding source which requires attention by the Obligations Manager will be color coded with red text so that the user can visually distinguish which work phase funding sources require attention. Work phase funding sources requiring OM attention are those where one of the following conditions apply:

- One or more funding transactions have an Obligation Status of "Pending"
- One or more funding transactions have an Obligation Status of "OM Notified"

The following is a mockup of the Work Phases tab for a project where OM attention is need for two Road Construction funding sources:

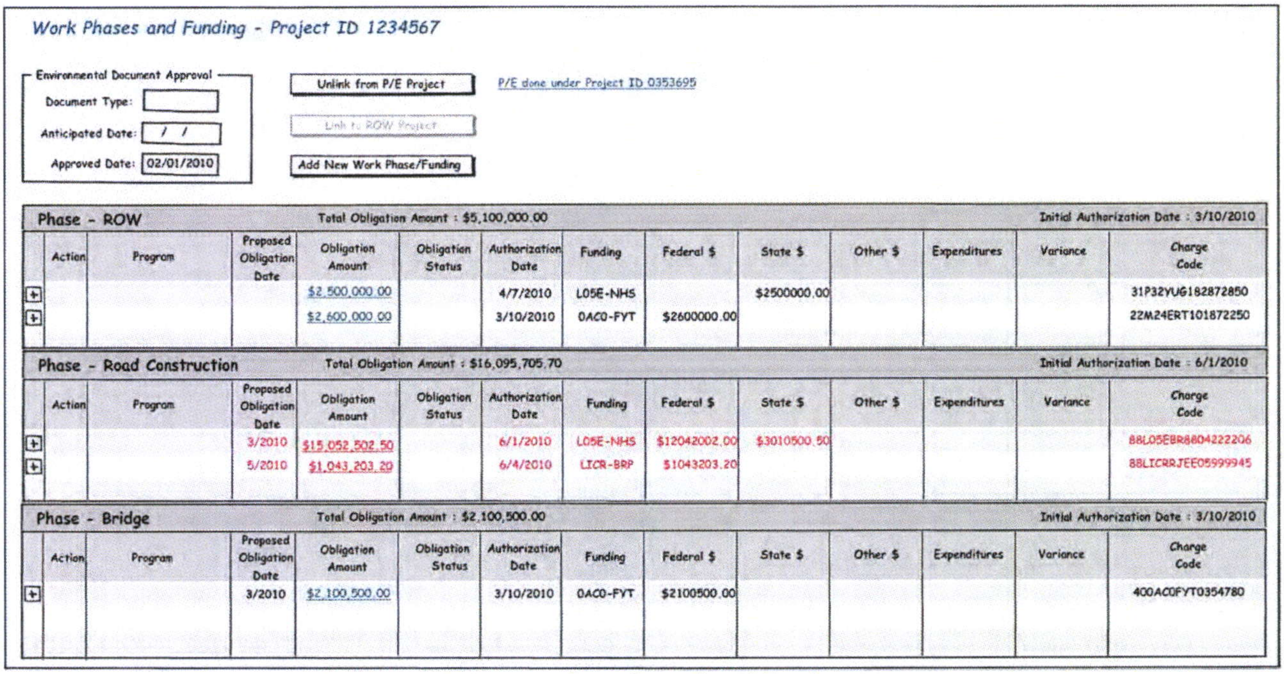


Figure 32 - Work Phases and Funding Tab - Obligations Management

2.3.2.4.1 Edit Work Phase and Funding Interface

The Edit Work Phase and Funding interface allows the user to assign work phase funding sources to a project and allocate funding to each work phase funding source. This interface is only available for those users who have been granted either the "Ability to Program Projects" or "Ability to Obligate Funds" permission. The following is a mockup of this interface:

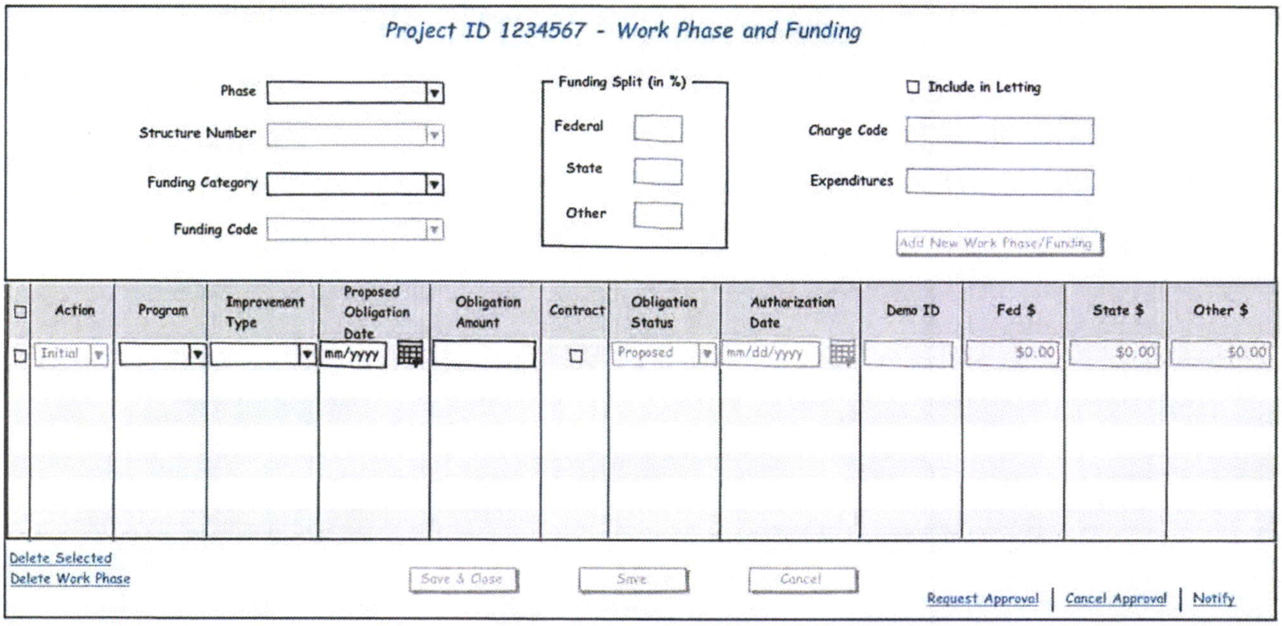


Figure 33 - Edit Work Phase and Funding Interface

The Edit Work Phase and Funding interface is divided into two sections.

- **Header fields** – These fields are located at the top of the interface and define the work phase and funding source.
- **Funding transaction level fields** - This area provides details on each funding transaction for the work phase funding source defined in the header fields.

The following defines the header fields:

- **Phase** – This is the work phase for the funding and is required. This field will have an associated drop down list. This drop down list will be populated with all available work phases as defined in the LUWorkPhase code list table. Example Phases are Road, Utilities, Bridge, Other, and ROW. Phases that fall into the category of "Construction Phases" are Road, Utilities, Bridge, and Other. The following rules will be applied to the Phase field:
    - The Bridge phase may not be selected if the user has not selected any bridges from the Routes interface for the project.
    - The P/E phase may not be selected if the project has a P/E Work Phase from another project linked to it.
    - The ROW phase may not be selected if the project has a ROW Work Phase from another project linked to it.
- **Structure Number** – This is the Structure Number associated with the work phase funding source when the Phase is set to Bridge. This field will have an associated drop down list. This drop down list will be populated with all Structure Numbers for the bridges selected from the Routes interface for the project. This field is only enabled when the Phase is set to Bridge.

- **Funding Category** – This is the funding category associated with the work phase. This field will have an associated drop down list. This drop down list will be populated with all funding categories as defined in the LUFundingCategory code list table. This field is required. A user with the "Ability to Program Projects" permission will be allowed to enter the Funding Category for a work phase only when creating the initial funding source transaction. A user with the "Ability to Obligate Funds" permission will be allowed to modify the Funding Category.

Funding source transactions should be created in a manner such that obligations are separated by funding sources. That is, if federal funds are used in a funding source, then only "matching" state or other funds should be combined with these federal funds into a funding source transaction. If additional state or other funds are required then these must be specified under another funding transaction for the work phase with a different funding source. These obligations must be separated into multiple transactions so that users can get an accurate report of project costs associated on funding sources.

- **Funding Code** – This is the funding code associated with the work phase. This field will have an associated drop down list. This drop down list will be populated with funding codes as defined in the LUFundingCode code list table and will be filtered based upon the Funding Category selected. This field is required. A user with the "Ability to Obligate Funds" permission will be required to enter the funding code for the work phase and may later modify the funding code values. A user with Programming permission may not edit this field.
- **Funding Split** – This group box defines the funding split for the work phase from Federal, State and Other sources. The funding split values are entered as percentages and must sum to a total of 100%. An OM user will be required to enter the funding split percentages. A user with Programming permission may not edit these fields.
    - **Federal** – This field denotes the percentage of the funding for the work phase that comes from Federal sources.
    - **State** – This field denotes the percentage of the funding for the work phase that comes from State sources.
    - **Other** – This field denotes the percentage of the funding for the work phase that comes from Other sources.
- **Include in Letting** – This checkbox denotes if the work phase is to be included in the letting of the project. This field is associated with the work phase directly such that the checked state applies to all work phase funding sources for the work phase. This check box will be unchecked and disabled for the following work phase types which are never let: Utilities, ROW, and PE.
- **Charge Code** – This is the charge code associated with the work phase. This is a display only field. The charge code value will be system generated once an authorization date has been assigned.
- **Expenditures** – This is the total expenditures to date for the work phase. This field is display-only and is calculated internally by the system using data imported from Projects in Progress files created by the General Ledger application. Details on the Projects in Progress import process can be found in the 2.3.2.4.3 section of this design document.

The following defines the funding transaction level fields:

- **Delete Checkbox** – Functionality is provided to allow one or more existing funding transactions to be removed from a work phase of a project. A transaction may only be deleted if its Obligation Status is set to "Proposed." The exception to this rule is that an OM Superuser may delete a funding transaction regardless of the Obligation Status value. In order to remove one or more proposed funding transactions, the user simply checks the checkbox to the left of each funding entry in the transaction table. Once all funding transactions to be removed have been checked, the "Delete

Selected" link at the bottom of the table is selected. All identified funding transactions are removed from the system and the contents of the transaction table are updated to reflect the removed records.

The entire Work Phase/Funding header may be deleted if all funding transactions have their Obligation Status set to "Proposed." In this case the "Delete Work Phase" link at the bottom of the table is available and when selected, will delete the Work Phase/Funding header along with all of the funding transactions. After the delete is successfully completed the user is taken back to the Work Phases and Funding tab which has been updated to remove the deleted Work Phase.

Only users who have been granted the "Ability to Program Projects" permission or who are denoted as being an OM Superuser may delete either a Proposed Transaction or a Work Phase.

- **Action** – This is the action associated with the work phase funding transaction. This field will have an associated drop down list. This drop down list will be populated with action codes as defined in the LUAction code list table (i.e. I, M, R and F). This field is required. Action will default to a value of "I"(Initial) for the first funding transaction for a work phase funding source, and will default to a value of "M"(Modify) for all subsequent funding transaction entries. Only a user with the "Ability to Obligate Funds" permission will be allowed to edit this field.
- **Program** – This is the Program for the funding transaction. This field will have an associated drop down list. This drop down list will be populated with program values as defined in the LUProgram code list table. This field is required. Only a user authorized to Program a Project will be allowed to edit this field. For all funding transactions after the initial transaction is defined, the Program value will default to the value from the initial transaction.
- **Improvement Type** – This is the type of improvement. This field will have an associated drop down list. This drop down list will be populated with all improvement types as defined in the LUImprovementType code list table. This field is required for all work phases related to a federal aid project.
- **Proposed Obligation Date** – This is the month and year of the proposed date when funding should be obligated for the transaction. This field will display using the format "mm/yyyy." Only a user authorized to Program a Project may enter a value in the field. Once funds have been obligated for the transaction and an authorization date has been assigned the Proposed Obligation Date will display as empty for the transaction.
- **Obligation Amount** – This is the amount of money to be obligated for the work phase funding transaction. This amount is entered by a user authorized to Program a Project and may be updated by a user authorized to Obligate Funds.
- **Contract** – This checkbox denotes if the funds are to be obligated for contract work or for SCDOT labor. When checked, the funds are to be used for contract work.
- **Obligation Status** – This is the status of the obligation process for the funding transaction. This field will have an associated drop down list. This drop down list will be populated with obligation status codes as defined in the LUObligationStatus code list table. This field is required. Only a user authorized to Obligate Funds will be allowed to edit this field.

The values for this field will be determined by actions from the user. The possible actions and values for the "obligation status" field are as follows:

User Action	Obligation Status Value
The PM has created a new transaction or modified an existing proposed transaction.	Proposed
The project is approved and the system has automatically	OM Notified

User Action	Obligation Status Value
sent a notification to OM, but OM has not reviewed the transaction.	
OM has been notified and is reviewing the transactions marked as "OM Notified." OM manually changes the obligation status to "Pending."	Pending
OM has received authorization and manually changes the obligation status to "Authorized."	Authorized

Table 4 - Work Phase and Funding Obligation Status Values

- **Authorization Date** – This is the date when the funding has been authorized. This field will be automatically set to the current date when Obligation Status is set to "Authorized." Only a user authorized to Obligate Funds will be allowed to edit this field. This field may only be modified when the Obligation Status field is set to a value of "Authorized."
- **Demo ID** – This is a free-form text field. This field is not required to contain a value.
- **Federal $** - This is the amount of money authorized for the work phase transaction that comes from Federal sources. This field is display only and is calculated internally and is set using the formula,

  *Federal $ = Obligation Amount * Federal Percentage*

  If the transaction has not been authorized, then this field will display a value of $0.00.
- **State $** - This is the amount of money authorized for the work phase transaction that comes from State sources. This field is display only and is calculated internally and is set using the formula,

  *State $ = Obligation Amount * State Percentage*

  If the transaction has not been authorized, then this field will display a value of $0.00.
- **Other $** - This is the amount of money authorized for the work phase transaction that comes from Other sources. This field is display only and is calculated internally and is set using the formula,

  *Other $ = Obligation Amount * Other Percentage*

  If the transaction has not been authorized, then this field will display a value of $0.00.

Buttons and links located on this interface are as follows:

- **Add New Work Phase/Funding** – This button allows a user to add a new work phase/funding record. All fields will initially be empty. This button will only be available to user who have been given the "Ability to Program Projects" permission or who are an OM Superuser.
  Once a new work phase/funding record has been defined, the system will automatically insert a blank row in the funding transaction table. All fields will be initially empty with the exception of Action which will default to "Initial" and Obligation Status which will default to "Proposed." To add subsequent transactions, the user simply begins keying in data into the empty row that is directly beneath the last transaction record.
- **Save & Close** – This button saves all changes to the database. After the save is complete, the Edit Work Phase and Funding interface is closed.
- **Save** – This button saves all changes to the database. After the save is complete, the user remains in the Edit Work Phase and Funding interface.
- **Cancel** – This button closes the Edit Work Phase and Funding interface without saving any changes made by the user.

- **Request Approval** – This link opens up the Request Approval interface. This link is only available for a user authorized to Program a Project. In addition, this link will only be enabled when the project requires initial approval, or when one or more fields which require approval have been changed since the project was previously approved. The Request Approval interface allows a user to initiate the approval request workflow. Once all Approval Recipients have approved the project then OM will automatically get notified that the project is ready to have funding obligated to it. Details on the Request Approval interface are located in the Approvals section of this document.
- **Cancel Approval** – This link opens up the Cancel Approval interface. This link is only available for a user authorized to Program a Project. In addition, this link will only be enabled when the project is currently in an approval process. The Cancel Approval interface allows a user to cancel the current approval process. Details on the Cancel Approval interface are located in the Approvals section of this document.
- **Notify** – This link opens up the Notification interface. This interface allows the user to send a notification message to a list of users. By default, this list of users will be those users in the current users Notification Group, as assigned in the User Maintenance interface. From the Notification interface the user will also be able to include the PR2 report as part of the notification email message. Details on the PR2 report are located in the Reports section of this document. Details on the Notification interface are located in the Approvals section of this document.

2.3.2.4.2 Edit Work Phase and Funding Access

Only users who have been granted either the “Ability to Program Projects” or the “Ability to Obligate Funds” permission will be able to access the Edit Work Phase and Funding interface. The following mockup depicts the editable status of each field in the interface based upon these two permissions:

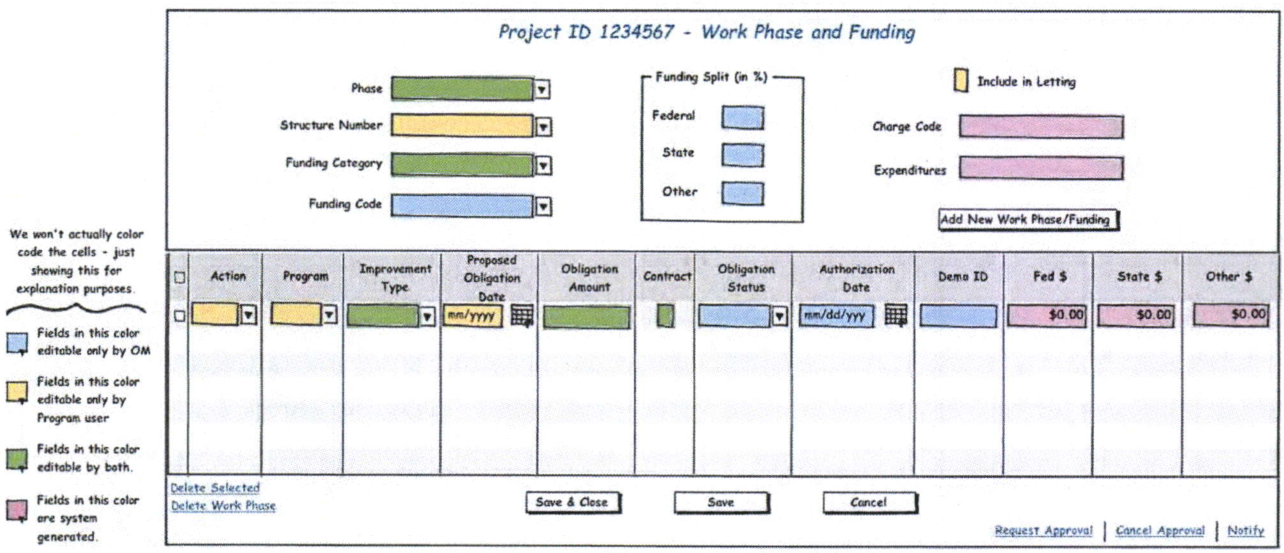


Figure 34 - Edit Work Phase and Funding Editable Fields by User Type

The following rules also are applied to determine the editable status for the work phase funding source header fields based on user access privileges:

- If the Project is currently within an approval process, then no work phase funding source header fields may be modified.

- A user with the "Ability to Program Projects" permission may modify the header fields if all funding transactions have an Obligation Status of "Proposed" or "OM Notified."
- A user with the "Ability to Obligate Funds" permission may modify the header fields if any one of the following conditions is true:
    - All funding transactions have an Obligation Status of "Proposed" or "OM Notified"
    - At least one funding transaction has an Obligation Status of "Pending" and no funding transaction has an Obligation Status of "Authorized"
- An OM Superuser may modify the headers fields at any time regardless of the Obligation Status for the funding transactions. The only time an OM Superuser may not modify the header fields is when the project is within an approval process.

The following rules also are applied to determine the editable status for each funding transaction based on user access privileges:

- If the Project is currently within an approval process, then no funding transaction records may be modified.
- A user with the "Ability to Obligate Funds" permission may only modify a funding transaction if one of the following conditions is true:
    - The funding transaction has an Obligation Status of "Pending"
    - The funding transaction has an Obligation Status of "OM Notified"
- A user with the "Ability to Program Projects" permission may modify a funding transaction if one of the following conditions is true:
    - The funding transaction has an Obligation Status of "Proposed" and OM has not been notified through the approval process.
    - The funding transaction has an Obligation Status of "OM Notified." If the PM user modifies this transaction then the system will automatically reset the funding transaction to denote that OM has not been notified.
- An OM Superuser may modify a funding transaction regardless of the Obligation Status value. The only time an OM Superuser may not modify a funding transaction is when the project is within an approval process.

2.3.2.4.3 Expenditures Import from Projects in Progress Files

All expenditure data reported in the P2S system will originate from the General Ledger application. A process will be created as part of the P2S system which will import expenditures data from Projects in Progress files created by the General Ledger application. The following defines the basics of this import process:

- The Projects in Progress file will be placed in a network share location. The share location and file name will be stored in a P2S configuration table.
- The P2S import process will run nightly and will check for the existence of the Projects in Progress file in the network share location.
- If a Projects in Progress file exists, then the import process will load the expenditures data into the P2S database. NOTE: The system date of the Projects in Progress file will be captured and saved in the P2S database for reporting purposes.
- After the data has been imported, the Projects in Progress file will be deleted from the network share.

The initial data port process will not migrate any expenditure data from the PPMS system. Instead, all expenditure data will get loaded into the P2S database using this import process from a general ledger file.

The following defines the column positions of the Projects in Progress file and denotes how each field is stored in the P2S database:

Column	Description	P2S Column(s)
1	General Ledger Number	ProjectExpenditure.GeneralLedgerCode. This code is also the first 4 characters of the ProjectFunding.ChargeCode value associated with this record.
2	Project Code	ProjectExpenditure.ProjectCode. This code is also the fifth through the lastcharacters of the ProjectFunding.ChargeCode value associated with this record.
3	Expenditure Transaction Date	ProjectExpenditure.TransactionDate
4	Expenditure Transaction Description	ProjectExpenditure.TransactionDescription
5	Activity Code	ProjectExpenditure.ActivityCode
6	Objective Code	ProjectExpenditure.ObjectiveCode
7	Expenditure Amount	ProjectExpenditure.ExpenditureAmount

Table 5 - Column Positions of the Projects in Progress File

2.3.2.4.4 Detailed Expenditures Report

The Expenditures value for each work phase funding source shown on the Work Phases tab will be displayed as a hyperlink. This value represents the "expenditures to date" for the current work phase/funding source. When the hyper-link is selected, a detailed expenditures report for that work phase funding source will be displayed. The date the Projects in Progress file was uploaded to the server will be displayed in the title header of the report. The following is an example of this report.

Expenditures Report - Project ID 0354780

Phase:Road Construction Funding:OACO-FYT

As of 06/09/2012

Close

Date	Description	Activity Code	Object Code	Expenditure Amount	Expenditures To Date
3/16/2010	TOWN OF WAGENER	656	1340	$124,037.64	$124,037.64
5/15/2010	DEPARTMENTAL TRANSFERS	656	1340	-$117,036.09	$7,001.55
6/30/2010	VP TOWN OF WAGENER	656	1340	$25,889.52	$32,891.07

Print | Export

Figure 35- Detailed Expenditures Report

2.3.2.4.5 Status Fields and Authorization Workflows

This section details the Approval and Funding Authorization workflows and the supporting status fields necessary to track them. Each type of workflow requires one or more status fields to keep track of the current workflow step. Several database fields will be maintained at various levels of the project for the purpose of tracking project workflow. These status fields are explained below.

2.3.2.4.5.1 Status Fields

Approval Status

The approval status will track where the project is in the *Approval* workflow. This field is shown on the General Information tab within the "Project State" area. The values for this field will be determined by actions from the user and will be set automatically by the system. The possible actions and values for the approval status field are as follows:

User Action	Approval Status Value
Some of the project's planning fields have been entered but no funding has been requested.	In Planning Phase
At least one funding request has been entered but the PM has not requested approval.	Approval Required
The PM has selected the button "Request Approval."	Pending Approval
All users that are part of the approval cycle have approved the project.	Approved

Table 6 - Approval Status Field Values

Funding Status

The approval status is necessary so that each step of the Approval workflow can be tracked. Another important process to track is the *Funding Authorization* workflow. This process will be tracked using the *funding status* field. This field is shown on the General Information tab within the "Project State" area. The values for this field will be set automatically by the system based on actions from the user. The possible actions and values for the field are as follows:

User Action	Funding Status Value
Still in planning phase.	N/A
At least one Obligation Status for a fund transaction is set to "Proposed" and none are marked as "OM Notified" or "Pending."	Proposed Obligation
At least one Obligation Status for a fund transaction is set to "OM Notified" or "Pending."	Pending Authorization
All Obligation Status fields for every fund transaction are marked as "Authorized."	All Authorized

Table 7 - Funding Status Field Values

Obligation Status

The approval and funding status fields are stored at the *project* level. However, there are other status fields that will be stored at the *Funding Transaction* level. One of the Funding Transaction status fields is named "Obligation Status" as shown in the mockup below:

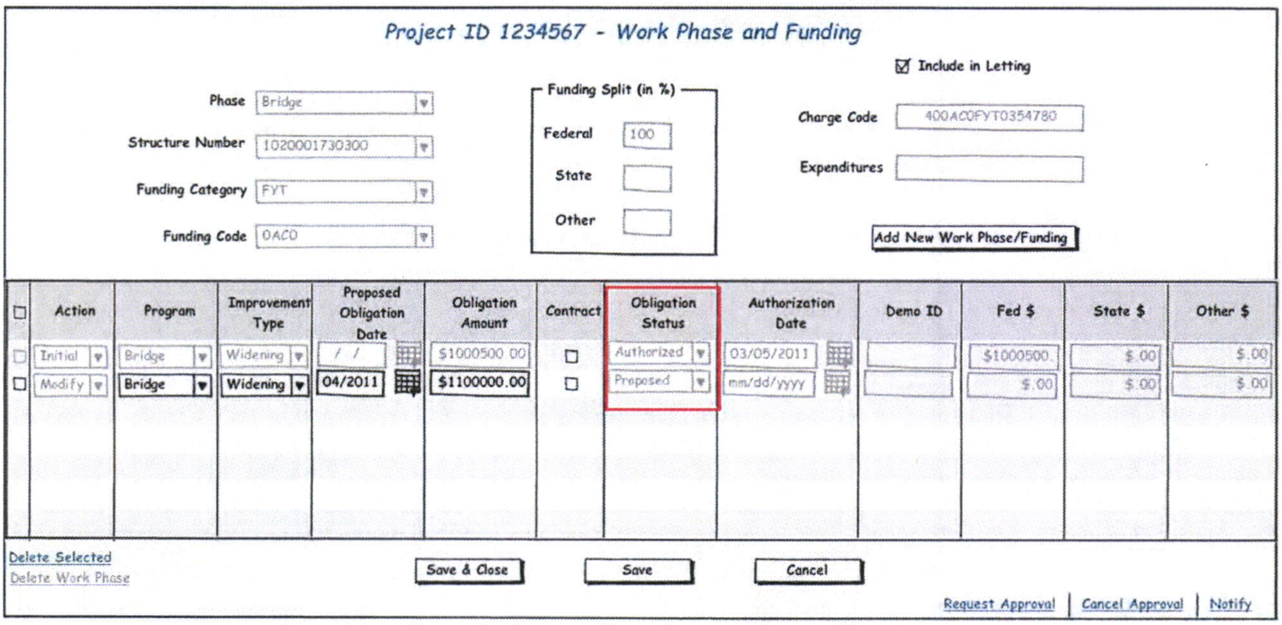


Figure 36 - Edit Work Phase and Funding Interface - Obligation Status

The values for this field will be determined by actions from the user. The possible actions and values for the *obligation status* field are as follows:

User Action	Obligation Status Value
The PM has created a new or modified a transaction.	Proposed
The project is approved and the system has automatically sent a notification to OM, but OM has not reviewed the transaction.	OM Notified
OM has been notified and is reviewing the transactions marked as "Proposed." OM manually changes the obligation status to "Pending."	Pending
OM has received authorization and manually changes the obligation status to "Authorized."	Authorized

Table 8 - Obligation Status Values

OM Notified Status

Another status field stored for each transaction but hidden from the user is used to store whether or not OM has been notified that a transaction has been "Proposed." Values for this field are 0 (has not been notified) and 1 (has been notified). This will prevent OM from being notified more than once about the same transaction. If OM has been notified for a funding transaction and the funding transaction is modified by the PM prior to the OM starting the funding request for the transaction, then the OM Notified Status will be reset to 0 for the funding transaction. This is because the change to the funding transaction must first be approved before OM can initiate the allocation of funds for the transaction.

2.3.2.4.5.2 Authorization Workflows

As mentioned earlier, the two main processes within P2S are the *Approval* and *Funding Authorization* workflows. Although both workflows are integral to the life cycle of a project, the manner in which they are executed is very different. The Approval workflow requires an *action* from a specific user or users, before it can be marked as approved or before it can be further modified. The Funding Authorization workflow is actually a sub-step of the Approval workflow. The Funding Authorization workflow occurs *after* a project has been approved. This workflow is triggered not by a request for *approval* but instead by a *notification* to Obligations Management to review proposed obligations and to obtain federal funding, if applicable. Once the funds have been authorized, the ability for OM to notify other users will be provided. However, unlike the Approval workflow, it is not necessary for the Funding Authorization workflow to complete before the project can be further modified (with the exception of the actual transactions being authorized).

To summarize:

An *approval* is required when:

1. A project is initially programmed. A project is defined to be initially programmed when one work phase funding source transaction has been created for the project.
2. One or more fields of a project requiring approval have been modified.

A *notification* will be sent to Obligations Management when:

1. A project's approval status changes to "Approved" and at least one funding transaction is in the "Proposed" state.

A *notification* may be sent to others when:

1. Obligations Management generates a PR2 and requests that it be sent to specific users.
2. Sometimes a project may not need approval or funding authorization but a notification needs to be sent to one or more users. This capability will be provided on all project data view and data entry tabs.

Approval Workflow

A link allowing the creator/editor of a project to "Request Approval" will be available on every project data entry screen. This link will not be enabled until either a project has been newly programmed *or* at least one field has been modified that requires approval. When this link is selected a popup window will display the Request Approval interface. This interface is described later in this section. In this interface the user enters an email subject and message and is shown the list of recipients that will be required to approve the project. This list cannot be altered at this time as it is set based upon the Approval Workflow assigned to the user by the System Administrator. The user may then select the appropriate button on the Request Approval interface to begin the approval process.

Once an approval process is initiated for a project, the following steps take place:

1. Recipients will be notified by email in order based on the list associated with the user's assigned Approval Workflow. Approval Workflows are created by a System Administrator using the Approval and Notification Maintenance interface, defined in the System Administration section of this document.
2. Each project approval recipient receives an email regarding the project. The email will include the message from the sender; system generated information on either the initial programmed state of the project, or changes made to the project that require approval; and a link to the P2S application, that when clicked, will take the recipient directly to the Approvals tab for the project.
3. The recipient verifies that the new project is as expected or that changes are acceptable. To do this, the recipient may look at project information across the tab pages. If modifications were made on a Projects tab, the changes requiring approval will be indicated by a distinctive color.
4. Once the recipient is ready to approve the project, the recipient selects the **Approve** button located on the Approval tab.
5. A popup window will be displayed in which the recipient must key-in the user-defined PIN to finalize the approval. This interface is described in the Approval Recipient Accept Interface section of this document.

The above process is repeated for each recipient. Once the final recipient in the approval list has approved the project, the following steps take place:

1. The system will change the project's Approval Status to "Approved."
2. The system will change the project's initial approval field (this is a hidden field) to a value of 1 to denote the project has been initially approved.
3. The system will move any project changes stored in the "Working" tables into the actual Project tables. The contents of the "Working" tables will be emptied for the project.
4. The system will then check to see if any funding transactions have the status of "Proposed" and a Proposed Obligation Date within a defined time period from the current computer system date. If so, a notification is sent to Obligations Management users with a system generated email detailing the specifics regarding the funding transactions requesting authorization. The system will set the "OM Notified" status field for these transactions to "1." The system will set the Obligation Status field for

these transactions to "OM Notified." This defined time period will be configurable and will be stored in the P2S configuration table.

5. OM will click the link provided in the email which will open P2S and display the Work Phase Funding tab for the project requiring authorization.
6. OM will click on one or more funding sources on the Work Phase Funding screen requiring authorization. These records will be distinctly indicated by a text color of red.
7. Once a funding source is clicked, the edit interface for that Work Phase Funding source will be displayed.
8. OM will manually change the status of each transaction currently set to "OM Notified" to "Pending."
9. At this point, OM may choose to create a PR2 report so that data is readily available to enter into FMIS.
10. Once OM obtains authorization from FMIS for each transaction, they will manually change the corresponding status fields to "Authorized."
11. OM can choose to send out a PR2 report with a notification to specific users (default list will be provided which can be deleted from or added to).

To account for the fact that there may be one or more funding transactions with a Proposed Obligation Date that is in the future, P2S will run a nightly process that will review each project and look for the following criteria:

- Project is Approved
- Funding Source Transaction has an Obligation Status of Proposed
- Funding Source Transaction has a Proposed Obligation Date within the defined time period from the current computer system date

The nightly process will send out automatic notification messages to OM for each project that meets the above criteria. In addition, the Obligation Status for each funding transaction meeting the above criteria will have its Obligation Status set to "OM Notified."

As an example, a PM sets up PE, RW and CON proposed funding source transactions, where the PE has a date within the current month; RW has a date a year in the future and CON has a date two years in the future. When the project is approved all three of these funding sources are also approved, however OM will only be notified that PE funding requires authorization. The nightly process will a year later notify OM for the RW funding transaction and will two years later notify OM for the CON funding transaction.

Each recipient also has the opportunity to deny an approval request for a project. If a recipient denies approval of a project then the following steps take place:

1. The recipient selects the "Deny" button located on the Approval tab.
2. A popup window will be displayed in which the recipient must enter a message explaining why the project is denied and must also key-in the user-defined PIN to finalize process. This interface is described in the Approval Recipient Deny Interface section of this document.
3. The approval process initiator and each recipient who has already approved the project request will be notified by email that approval of the project has been denied. This email will contain the message supplied by the recipient who denied approval of the project.
4. The system will change the project's Approval Status to "Approval Required."

Also, at any time during the approval process the initiator of the approval process or a System Administrator may decide to cancel the approval process. If this occurs, then the following steps take place:

1. The user selects either the "Cancel Approval" link on one of the interfaces or selects the "Cancel Approval" button located on the Approval tab.
2. A popup window will be displayed in which the user must enter a message explaining why the project approval process is being canceled and must also key-in the user-defined PIN to finalize the process. This interface is described in the 2.3.2.8.3 section of this document.
3. The approval process initiator and each recipient who has already approved the project request will be notified by email that approval process for this project has been cancelled.
4. The system will change the project's Approval Status to "Approval Required."

Project Re-Approval

Once a project has been initially approved, changes may be made to the project that requires the project to be re-approved. The following defines the project fields which when changed require project approval. Changes to these values only require approval once the project has been programmed (i.e. a funding request has been approved). Prior to funding being approved for the project, no changes to any particular data fields require approval.

- Program information on the General tab
  - Project Name
  - STIP Item
  - Project Type
  - Funding Type
  - Location
  - Proposed Letting Date
  - Project Status
- Route information on the Roads tab
  - County
  - Route Type
  - Route Number
  - Route Auxiliary
  - BMP
  - EMP
  - Work Type
  - Treatment Type
- Bridge and Railroad information on the Routes tab
  - County
  - Route Type
  - Route Number
  - Route Auxiliary
  - Milepoint
  - Structure Number
  - Crossing Name/Number
  - Line/Milepost
  - Work Type

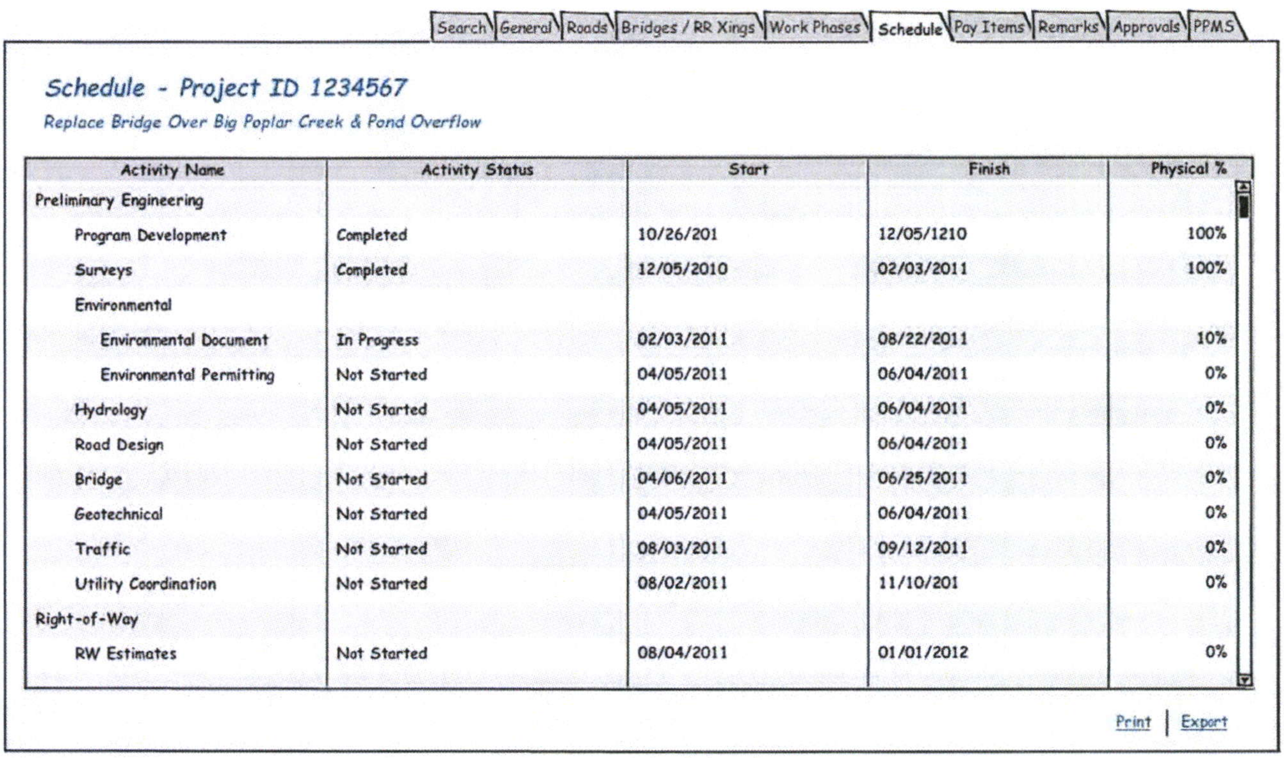
If an approval required field has been changed, only users having edit or approval privileges will see the new values when editing the project. All query, report and view interfaces will show the previously approved project data and will not show the any of these changes which have not been approved.

In order to maintain the approved values and the modified values which require approval for these fields, "working" tables and columns will be created in the P2S database. If a change is made to any of the above listed approval required fields, then the system will automatically save the change to the "working" database table and column. The "real" project table and column will not be updated with these values. Once the approval process is initiated again for the project and the project is approved by all approvers, the system will automatically move the updated values from the "working" tables into the "real" project table. At this point these new approved values will be available from all query, report and view interfaces.

2.3.2.5 Schedule

The Schedule tab will contain schedule information for the activities associated with the project. The data on this tab will be retrieved from the Primavera P6 database based on the given Project ID. The information will be obtained using an API provided by Primavera, and will be displayed in read-only format.

The following mockup shows the Schedule tab with some example data:



Activity Name	Activity Status	Start	Finish	Physical %
Preliminary Engineering				
Program Development	Completed	10/26/201	12/05/1210	100%
Surveys	Completed	12/05/2010	02/03/2011	100%
Environmental				
Environmental Document	In Progress	02/03/2011	08/22/2011	10%
Environmental Permitting	Not Started	04/05/2011	06/04/2011	0%
Hydrology	Not Started	04/05/2011	06/04/2011	0%
Road Design	Not Started	04/05/2011	06/04/2011	0%
Bridge	Not Started	04/06/2011	06/25/2011	0%
Geotechnical	Not Started	04/05/2011	06/04/2011	0%
Traffic	Not Started	08/03/2011	09/12/2011	0%
Utility Coordination	Not Started	08/02/2011	11/10/201	0%
Right-of-Way				
RW Estimates	Not Started	08/04/2011	01/01/2012	0%

Figure 37 - Schedule Tab

The project ID and project description will be displayed at the top of the page, followed by a table that lists activity details, ordered by start date. The fields in the table include:

Activity Name – A short descriptive name for each activity that will be conducted under the contract.

Activity Status – The current status of the activity: Completed, In Progress, or Not Started.

Start – The date that work on the activity has started, or is planned to start.

Finish – The date that work on the activity was finished, or is planned to be finished.

Physical % – The percent of time that has been spent on the activity, with respect to the total amount of time allotted to it.

The user may print or export the contents of the Schedule from this interface.

2.3.2.6 Pay Items

P2S will provide the ability to allow the input and modification of quantities and items required for a given project. The system will calculate the cost of each item given this information. The P2S database will be modified to include an item and cost table to support this task. The pay item information will be stored in these tables, and will be editable by the user from the Pay Items tab.

The Pay Items tab provides a summary view of all items and quantities associated with the project. The following is a mockup of the Pay Items tab for a project that has already had one pay item assigned to it:

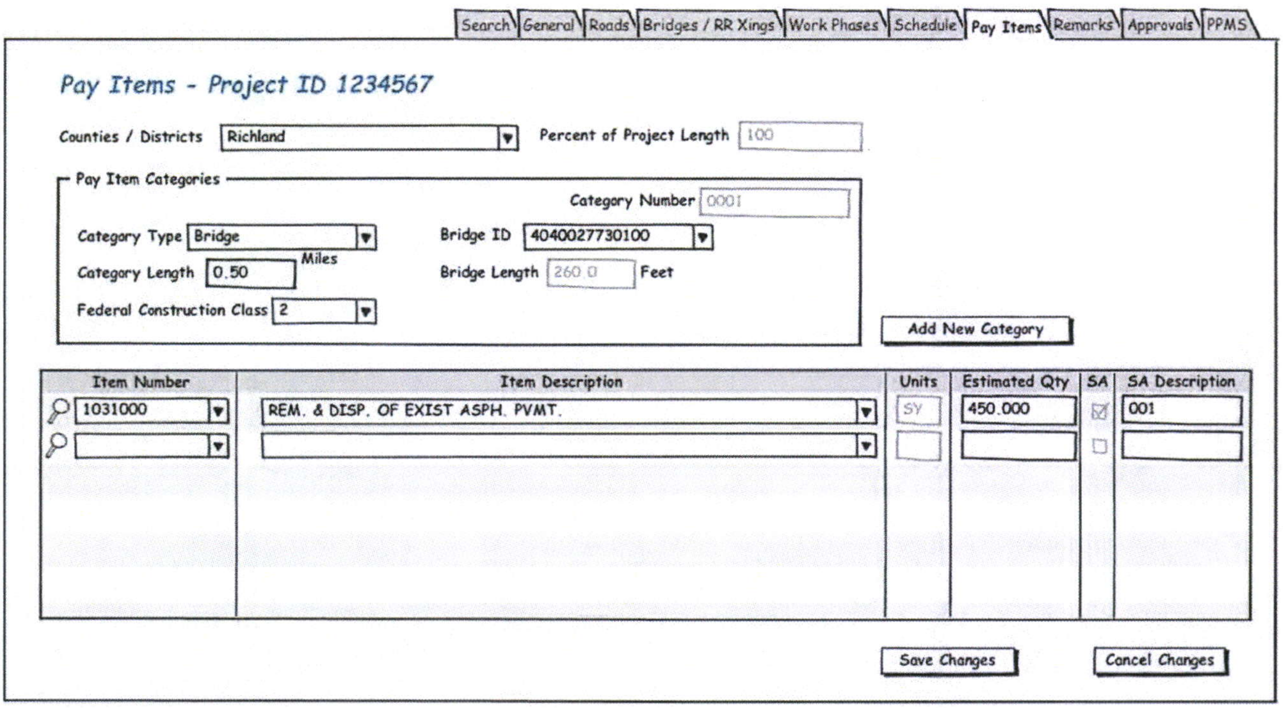


Figure 38 - Pay Items Tab

The upper part of the screen holds information about the pay item category. The table below it holds individual pay items that are associated with that category. Multiple pay items may be entered per category. To insert a new pay item, the user will select an Item Number from the drop down box in the last table row. Each time a new pay item number is selected, a new empty row will be added to the table. The Item Description, Units and Supplemental Agreement (SA) fields will be automatically filled in based on the selected Item Number. The user will need to fill in the Estimated Qty and SA Description fields (if applicable) manually.

To insert a new pay item category, the user will press the Add New Category button. This will clear the fields in the Pay Item Categories Group Box, allowing for the entry of new information. It will also clear the Pay Item table, allowing for the entry of new pay items associated with that category.

The fields on the Pay Items tab include:

Counties/Districts – This drop-down box will be populated with a list of the counties from which the routes are associated *or* with a list of the counties or districts to which the project has been associated if it's not a "route based" project (radio button on first Gen Info Tab).

Percent of Project Length – This field will be calculated from the lengths of road segments when the project is made up of specific routes. It is the percent of the total project road length that is located in the selected county. If the project is not "route based" then this field will not be populated and the user may enter a value.

Category Number – This read-only field is a unique ID number that will be generated by the system based on the selected County, Category Type, and Bridge ID (if the Category Type is Bridge).

Category Type – This drop down box lists the available category types: Road, Bridge or Other.

Bridge ID – This drop down box lists Bridge ID numbers as specified on the Routes tab for the selected county. It is only active if the Category Type has been set to Bridge.

Category Length – If the Category Type has been set to Road or Other, this field will be calculated based on the total length of all of the road segments included in the project in the selected county. The user may change the value that has been entered. If the Category Type has been set to Bridge, the field will be left empty for the user to fill in.

Bridge Length – This field will be set to the length of the selected bridge. RIMS will be queried for this value. If it is a new bridge, the user will enter the length in feet. It is only enabled if the Category Type has been set to Bridge.

Federal Construction Class – This drop down box is a list of Federal Construction Class numbers and descriptions.

- The search icon will bring up a window allowing the user to filter the list of items based on user-defined criteria. The user will also be able to sort each column by selecting on the column header. An example of this mockup follows:

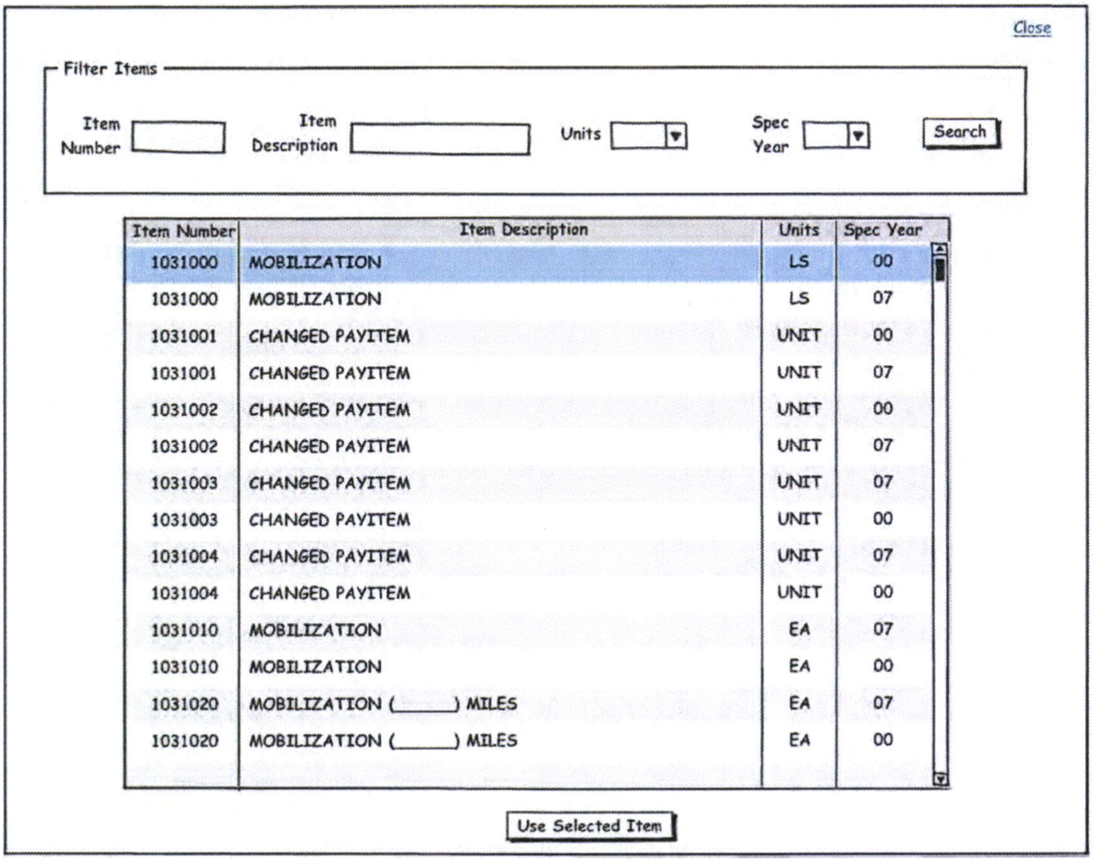


Figure 39 - Pay Items Tab - Search

From this interface, the user will enter the desired criteria (the Item Number and Item Description fields will perform wildcard searches) and then select the **Search** button. Once the desired item has been located, the user will select it and then click on the **Use Selected Item** button. This will pre-fill the currently selected Pay Item row with the selected item.

Item Number – This drop down box allows the user to select an item number for each new pay item. The item description will be automatically filled in based on the selected item number

Item Description – This drop down box allows the user to select an item description for each new pay item. The item number will be automatically filled in based on the selected item description.

Units – This text box will be automatically filled in based on the selected item number. It is the unit of measure for the Estimated Quantity field.

Estimated Qty (Estimated Quantity)- This field is available for the user to enter an estimated amount of pay item to be used.

SA – This box will automatically be checked or unchecked based on whether the selected item number is part of a supplemental agreement.

SA Description – This field is available for the user to enter a supplemental agreement description. It is only enabled if the SA checkbox is selected.

The available functions on the Pay Items tab include:

Add New Category – This button will create a new record, allowing the user to enter new category information and to insert pay items associated with the new category.

Save Changes – If this button is selected, any changes made to the fields will be written to the database.

Cancel Changes – This button will not save changes and will revert any modified fields back to the previous values.

2.3.2.7 Remarks

Within the P2S application, multiple remarks may be associated with individual projects. The Remarks tab provides a user with the ability to view all remarks previously entered by P2S system users for a project. The Remarks tab also provides a user with the ability to associate a remark to a project. The following is a mockup of the Remarks tab.

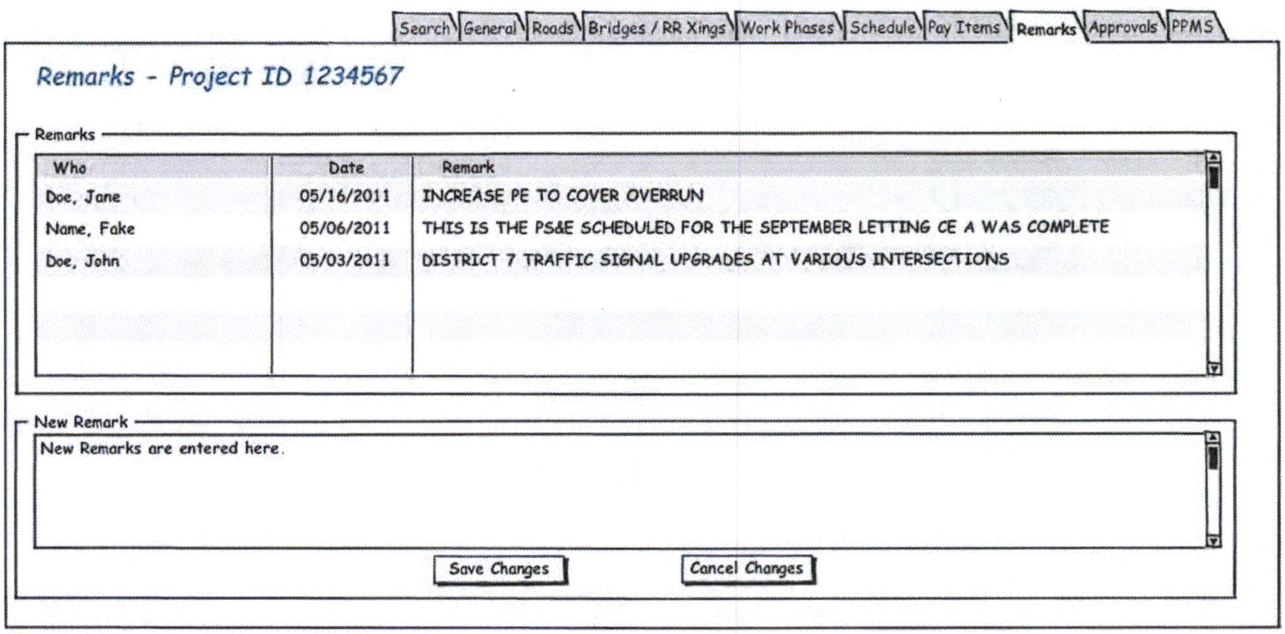


Figure 40 - Remarks Tab

The Remarks tab contains the following sections:

- **Remarks** – This section lists all existing remarks associated with the project. The remarks are sorted in descending date order so that the latest remark is displayed at the top of the list. Information provided for each remark will be the name of the P2S user who entered the remark, the date the remark was entered and the actual remark text.
- **New Remark** - This section allows a user to enter a new remark for the project. Only a user who has a P2S user account may enter a new comment. The New Remark field is limited to 500 characters.

- **Save Changes** – The Save Changes button will apply the newly entered Remark text to the project. The Remark will be displayed at the top of the Remarks list and the contents of the New Remark entry text box will be cleared.
- **Cancel Changes** – When selected, this button will not save changes and the new Remark area will be cleared.

During the initial data load of the P2S database, remarks for existing projects will be imported from the Remarks table in the PPMS database into the ProjectRemark table in the P2S system. These imported remarks will all be available for review on the Remarks tab.

2.3.2.8 Approvals

During the life of a project in P2S, many changes will occur that require approval by DOT personnel having direct or indirect responsibility for the project. This section describes how approvals are requested and what happens during and after an approval cycle. This section also describes the "Approvals" tab which is used to display the history of approvals for a project. For detailed information regarding what constitutes the need for an approval, please refer to the section Workflow Events in this document.

2.3.2.8.1 Request Approval Interface

When a project field changes requiring approval by one or more DOT personnel, the "Request Approval" link will become enabled. These links are provided from all tabs where changing data would require approval. Examples of where this link is provided include the *General Information*, *Roads* and *Edit Work Phase and Funding* tabs. When this link is selected, the Request Approval interface will be displayed. The following is a mockup of this interface.

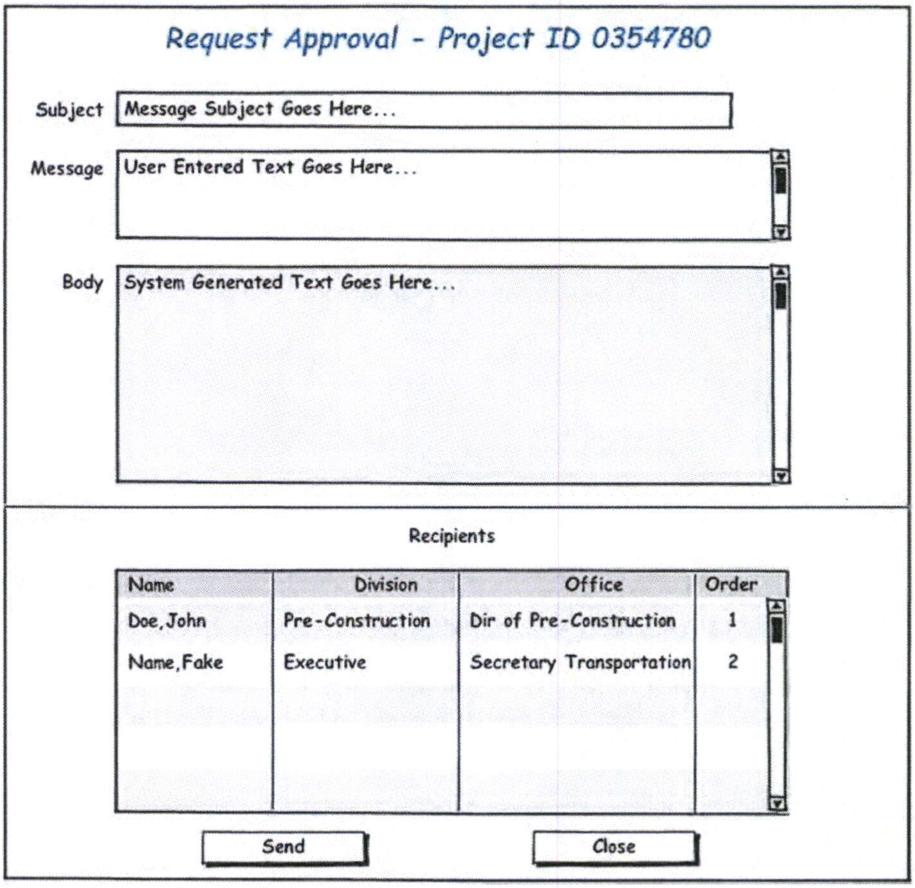


Figure 41 - Request Approval Interface

The following defines the fields on the Request Approval Interface.

- **Subject** – This is the text to use as the subject of the system generated approval email message. The contents of this field will be initially set using the text "Approval Request for Project <Project ID>." The user may modify the contents of this field.
- **Message** – This is a free form text field in which the current user may enter text to be included at the start of the system generated approval email message.
- **Body** – This is the portion of the message that is automatically generated by the system. This text will include details on the project information changed that requires an approval and a link that will take the user directly to the project in the P2S application. The contents of this field may not be modified by the user.
- **Recipients** – This list box displays the P2S users who are the recipients of the approval email message. This list is populated with the P2S users who are members of the current user's assigned Approval Workflow. The information displayed for each recipient is:
    - **Name** – The name of the user
    - **Division** – The division of the user
    - **Office** – The office of the user
    - **Order** – This field contains the order in which each user is notified. For example, a user with an order of 2 will not be notified until the user with an order of 1 has approved the project.

Two buttons are located at the bottom of the Request Approval Interface:

- **Send** – This button will initiate the Approval Workflow. A project approval email will be sent to the P2S users identified in the recipients list with a priority of 1. After the approval workflow process is started, the Request Approval interface is closed. Details on the approval process may be found in the Approval and Funding Authorization Workflows section of this document.
- **Close** – This button will close the Request Approval interface without initiating the approval process.

The following is a mockup example of the system generated message contents for a project requiring initial approval.

> **Initial approval is required for Project ID 0354780**
>
> **To review this project for approval please click on the link below**
> http://ps2server/P2S/Approval/ProjectID=0354780

Figure 42 - Example Request Initial Approval System Generated Message

The following is a mockup example of the system generated message contents for a project which has previously been approved, but requires approval again because of changes made to the project.

Approval is required for Project ID 0354780

To review this project for approval please click on the link below
http://ps2server/P2S/Approval/ProjectID=0354780

Changes made to the project since previous approval are:

Field	Old Value	New Value
Proposed Letting Date	10/01/2011	12/01/2011

Routes Added:

County	Route	BMP	EMP	Work Type	Treatment Type
Abbeville	S- 74	0.000	13.080	Widening	

Routes Modified:

		County	Route	BMP	EMP	Work Type	Treatment Type
1	Old	Abbeville	S- 3	0.000	2.120	Preservation	Microsurfacing
1	New	Abbeville	S- 3	0.000	2.580	Preservation	Microsurfacing

Bridges/Railroads Added:

County	Route	Milepoint	Structure Number	Crossing Name/Number	Line/Milepost	Work Type	Treatment Type
Abbeville	SC 72	10.29	0140007240400	CALHOUN CREEK		Bridge	

Work Phase Funding Sources:

Phase	Program	Action	Proposed Obligation Date	Obligation Amount
Bridge	Bridge	Modify	08/2011	$250000.00
Road Construction	Widening	Modify	08/2011	$500000.00

Figure 43 - Example Request Approval System Generated Message Content

2.3.2.8.2 Approval Recipient Accept Interface

The recipient of a P2S approval email will have the ability to click on the link in the email and be taken directly into the P2S application. By doing so, the system will automatically place the user on the Approval tab for the given project. The approver may go to other tabs to review the project and once it is determined that the project is acceptable, they may select the **Approve** button on the Approvals tab. When the **Approve** button is selected, the Accept Approval interface will be displayed. The following is a mockup of the Accept Approval interface:

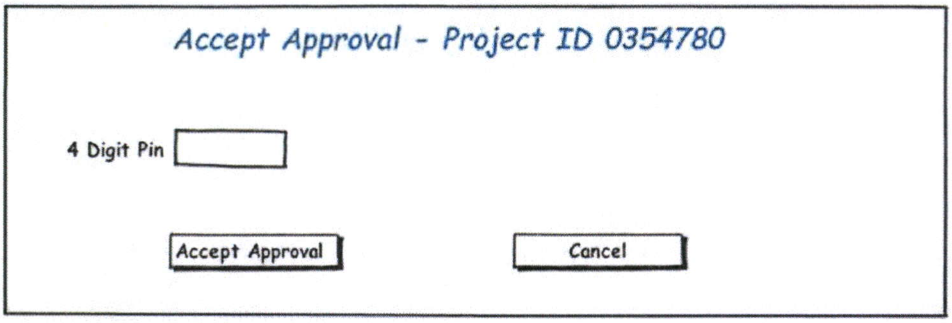


Figure 44 - Accept Approval Interface

The following defines the fields on the Accept Approval Interface:

- **4 Digit Pin** – This is the unique PIN value assigned to the user. The user must enter their PIN value before selecting the **Accept Approval** button. If no value or an incorrect value is entered the approval process will not take place.

Two buttons are located at the bottom of the Accept Approval Interface:

- **Accept Approval** – This button will approve the project. When selected, the system will first verify that the user has supplied their correct 4 digit PIN value. If the user has entered an incorrect PIN value then the system will display a message to the user and will not continue with the approval workflow. If the user has supplied the correct PIN value then a project will be marked as approved by the approver and a request approval will be set to the next approver in the project's approval workflow.
- **Cancel** – This button will close the Accept Approval interface. The current approver must still either accept or deny approval of the project.

2.3.2.8.3 Cancel Approval Interface

Once an approval process is initiated for a project the need may arise for the creator of the project or a System Administrator to cancel the approval process before it has completed. A user may initiate the cancel approval process for a project from various locations within the P2S system. Examples are from the "Cancel Approval" link located on the Edit Work Phase and Funding interface, or the **Cancel Approval** button located on the Approval tab. When any of these are selected, the Cancel Approval interface will be displayed. The Cancel Approval interface allows a user to cancel an approval request workflow for a project prior to its completion. The following is a mockup of the Cancel Approval interface:

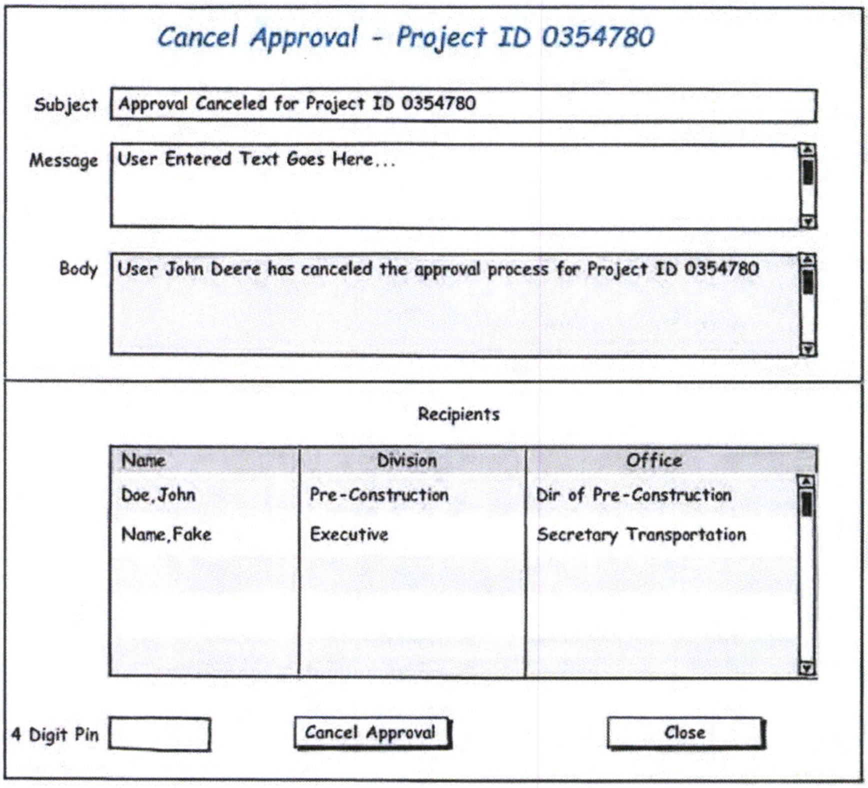


Figure 45 - Cancel Approval Interface

The following defines the fields on the Cancel Approval Interface:

- **Subject** – This is the text to use as the subject of the system generated cancel approval email message. The contents of this field will be initially set using the text "Approval Canceled for Project <ProjectID>." The user may modify the contents of this field.
- **Message** – This is a free form text field in which the current user must enter text to be included at the start of the system generated cancel approval email message.
- **Body** – This is the portion of the message that is automatically generated by the system and will contain the text "User <P2S User> has canceled the approval process for Project ID <ProjectID>." The contents of this field may not be modified by the user.
- **Recipients** – This list box displays the P2S users who are the recipients of the cancel approval email message. This list is populated with the members of the project's approval workflow who have already approved the project along with the user who is currently reviewing the project for approval. The information displayed for each recipient is:
  - **Name** – The name of the user
  - **Division** – The division of the user
  - **Office** – The office of the user
- **4 Digit Pin** – This is the unique PIN value assigned to the user. The user must enter their PIN value before selecting the **Cancel Approval** button. If no value or an incorrect value is entered, the cancel approval process will not take place.

Two buttons are located at the bottom of the Cancel Approval Interface:

- **Cancel Approval** – This button will cancel the Approval Workflow process for the project. When selected, the system will first verify that the user has entered text in the Message field and has supplied their correct 4 digit PIN value. If either of these is not done, then the system will display a message to the user and will not cancel the approval process. If the user has supplied all the necessary information then a project cancel approval email will be sent to the P2S users identified in the recipients list.
- **Close** – This button will close the Cancel Approval interface. The approval process for the project will continue without interruption.

2.3.2.8.4 Approval Recipient Deny Interface

A project approver may decide after reviewing the project that something is incorrect with the project. In this case, the approver may specify to deny approval of the project. The approver must deny approval of the project by selecting the **Deny** button on the Approvals tab. When the **Deny** button is selected, the Deny Approval interface will be displayed. The following is a mockup of the Deny Approval interface:

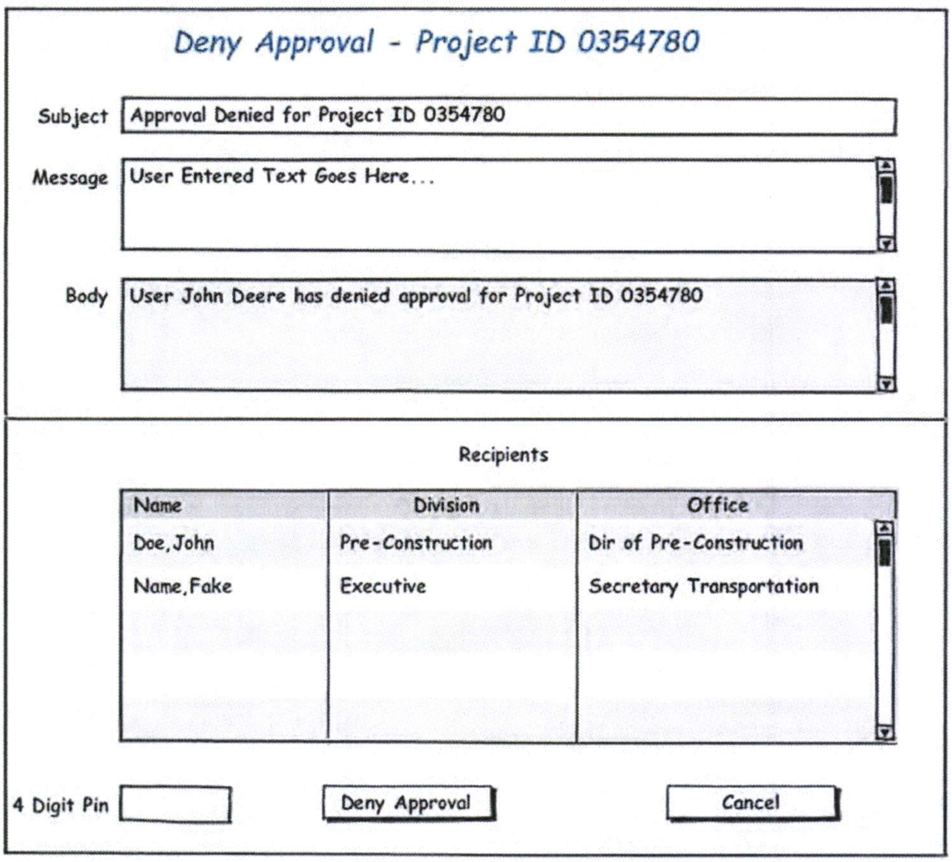


Figure 46 - Deny Approval Interface

The following defines the fields on the Deny Approval Interface:

- **Subject** – This is the text to use as the subject of the system generated deny approval email message. The contents of this field will be initially set using the text "Approval Denied for Project <ProjectID>." The user may modify the contents of this field.

- **Message** – This is a free form text field in which the current user must enter text to be included at the start of the system generated deny approval email message.
- **Body** – This is the portion of the message that is automatically generated by the system and will contain the text "User <P2S User> has denied approval for Project ID <ProjectID>." The contents of this field may not be modified by the user.
- **Recipients** – This list box displays the P2S users who are the recipients of the deny approval email message. This list is populated with the members of the project's approval workflow who have already approved the project along with the user who initiated the approval process. The information displayed for each recipient is:
    - **Name** – The name of the user
    - **Division** – The division of the user
    - **Office** – The office of the user
- **4 Digit Pin** – This is the unique PIN value assigned to the user. The user must enter their PIN value before selecting the **Deny Approval** button. If no value or an incorrect value is entered the deny approval process will not take place.

Two buttons are located at the bottom of the Deny Approval Interface:

- **Deny Approval** – This button will deny approval for the project. When selected, the system will first verify that the user has entered text in the Message field and has supplied their correct 4 digit PIN value. If either of these is not done, then the system will display a message to the user and will not continue with the deny approval workflow. If the user has supplied all the necessary information then a project deny approval email will be sent to the P2S users identified in the recipients list.
- **Cancel** – This button will close the Deny Approval interface. The current approver must still either accept or deny approval of the project.

2.3.2.8.5 Notification Interface

A user may decide at any time to initiate a notification process in which the user sends a notification message to one or more P2S users. A Notification process may be initiated from most screens within P2S by selecting the "Notify" link at the bottom right of the screen. When the "Notify" link is selected, the Notification interface will be displayed. This interface allows the user to send a notification message to a list of users. By default, this list of users will be those users in the current users Notification Group, as assigned in the User Maintenance interface. The following is a mockup of the Notification interface:

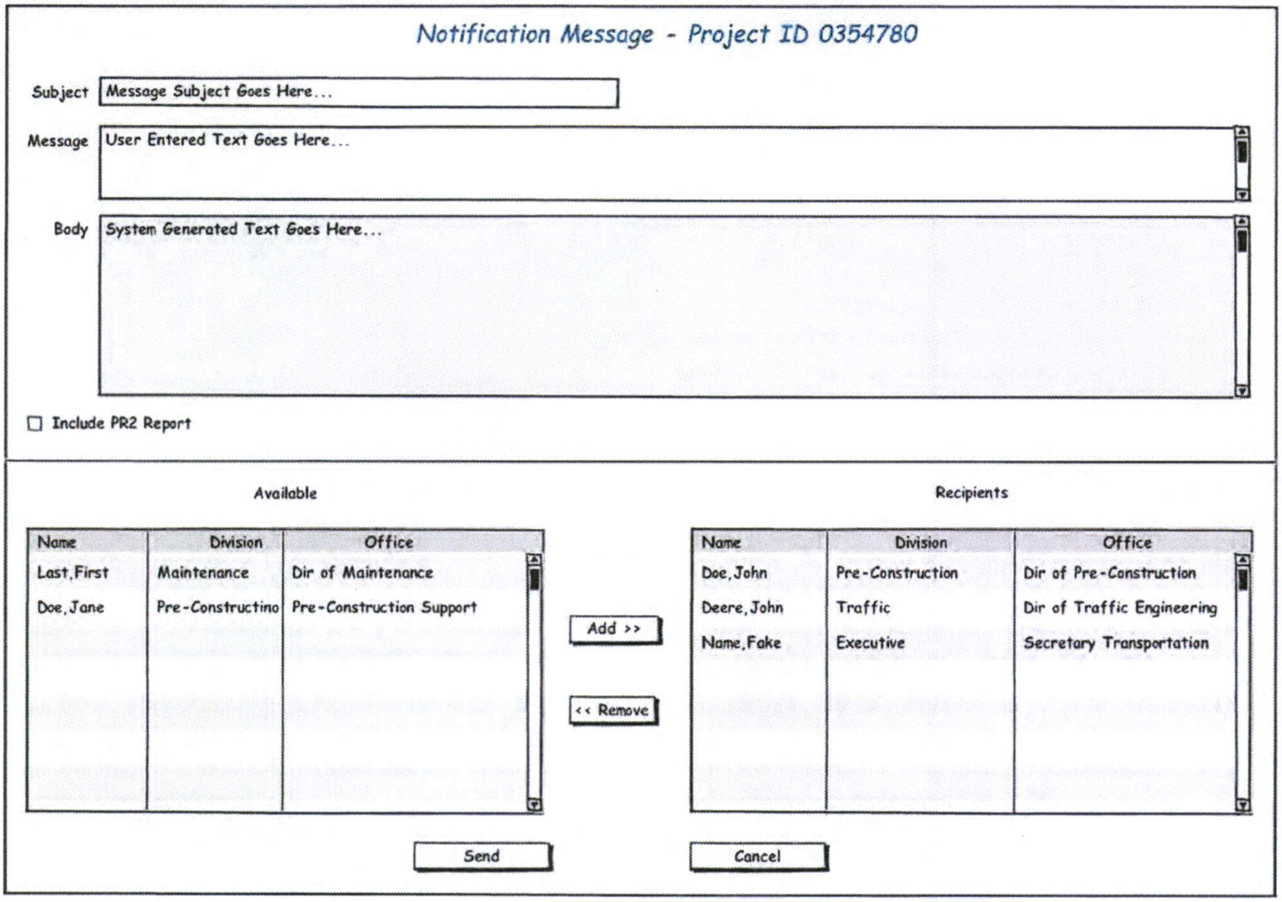


Figure 47 - Notification Interface

The following defines the fields on the Notification Interface:

- **Subject** – This is the text to use as the subject of the system generated notification email message.
- **Message** – This is a free form text field in which the current user may enter text to be included at the start of the system generated notification email message.
- **Body** – This is the portion of the message that is automatically generated by the system. This text will include a link that will take the user directly to the given project in the P2S application.
- **Include PR2 Report** – This checkbox will only be included in the Notification interface if it was accessed from the Edit Work Phase and Funding interface by a user who has been given the "Ability to Obligate Funds" permission or is an OM Superuser. When checked, the system will generate the PR2 report and include it in the system generated notification email message. Details on the PR2 report can be found in the Reports section of this design document.
- **Available** – This list box displays the P2S users that are available for selection to be added to the list of notification recipients. The information displayed is:
    - **Name** – The name of the user
    - **Division** – The division of the user
    - **Office** – The office of the user

- **Recipients** – This list box displays the P2S users who are currently selected to receive the notification message. This list is initially populated with the P2S users who are members of the current users Notification Group.

Four buttons are located at the bottom of the Notification Interface:

- **Add >>** - This button will add the selected user from the Available list to the Recipients list.
- **<< Remove** – This button will remove the selected user from the Recipients list and place the user in the Available list.
- **Send** – This button will send the email notification message to all P2S users identified in the Recipients list box. After all notification messages are sent, the Notification interface is closed.
- **Cancel** – This button will close the Notification interface without sending the notification message.

2.3.2.8.6 Approvals Tab

The Approvals tab provides the user with a view of the approval history for the current project. From this tab a user can see the complete approval history for the project and also if there are any outstanding changes to the project that require approval.

The following is an example of the Approvals tab for a project currently in its initial approval process:

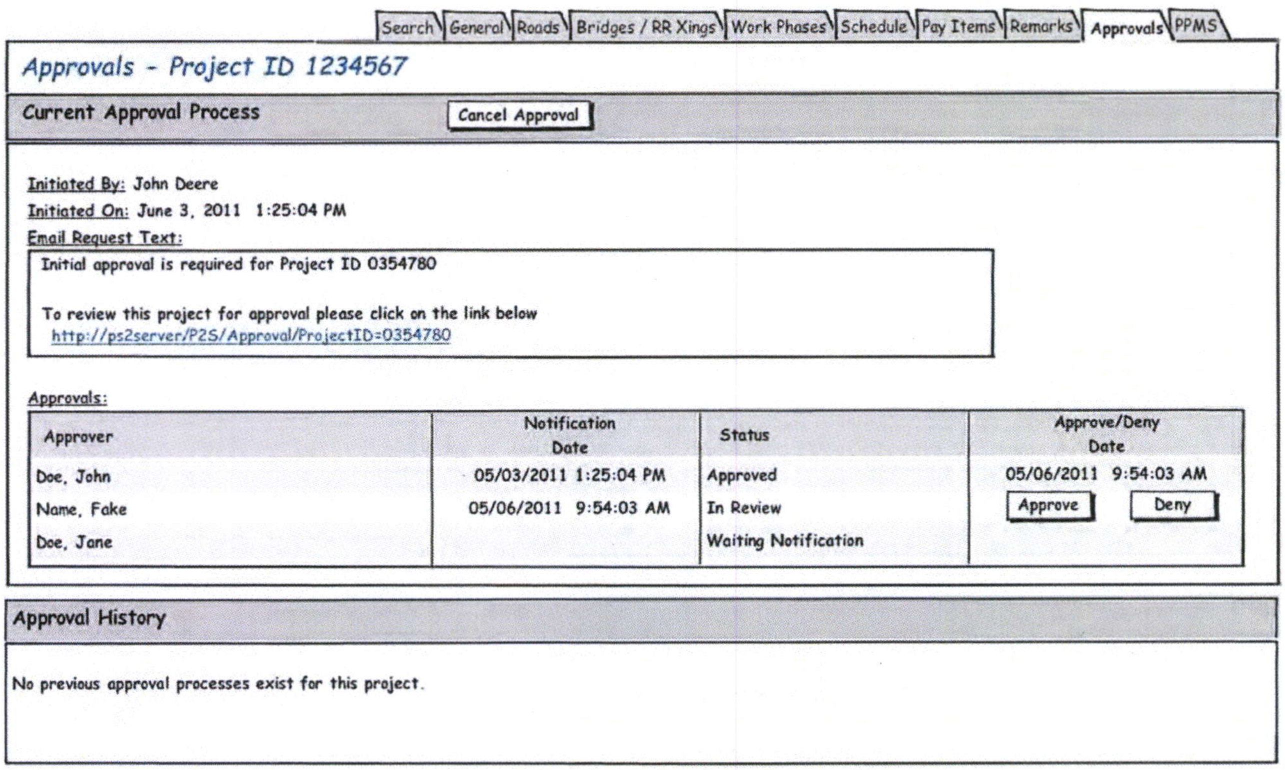
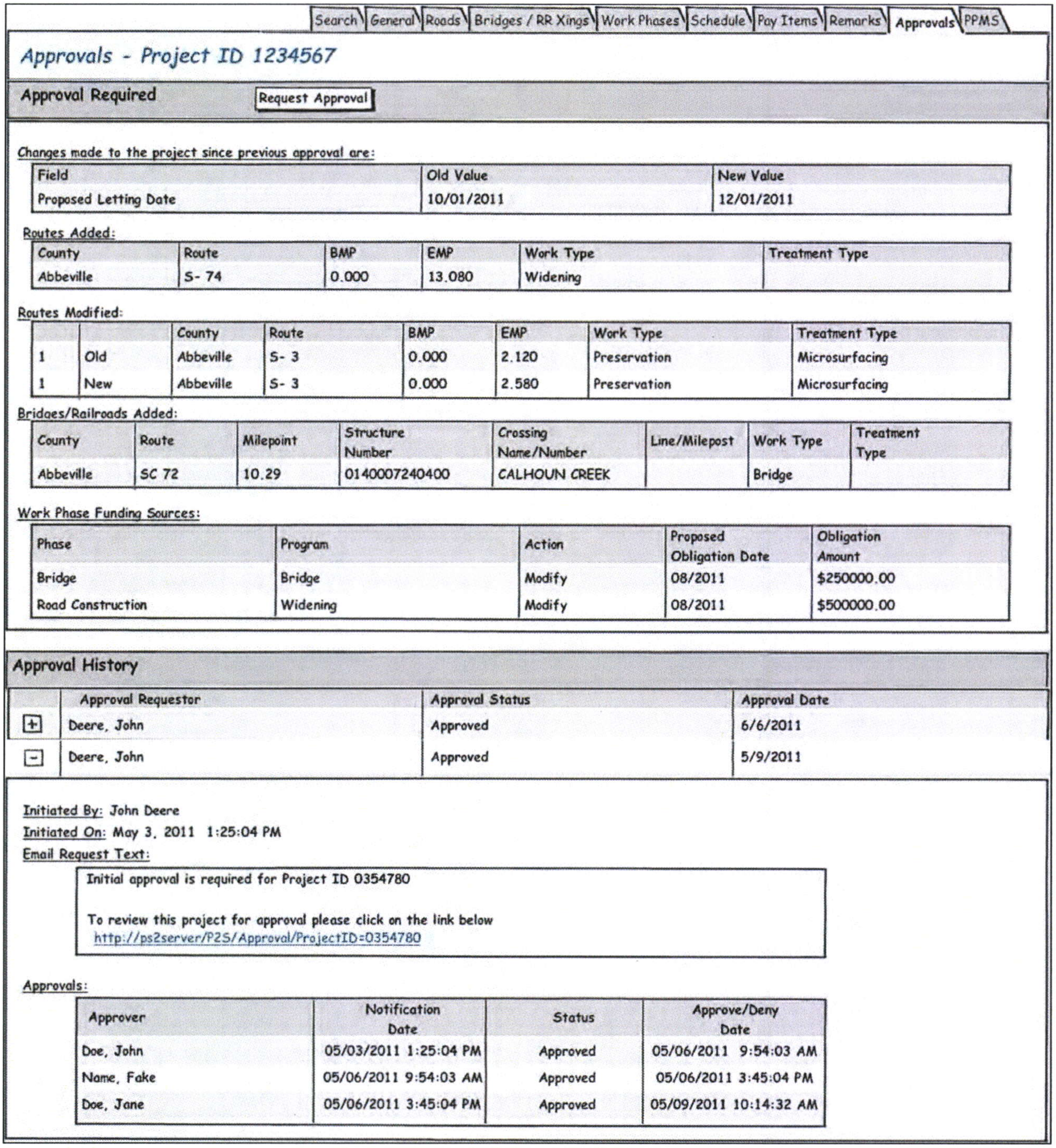


Figure 48 - Approvals Tab - Project in an Approval Process

The following is an example of the Approvals tab for a project to which changes have been made that require approval:



Search | General | Roads | Bridges / RR Xings | Work Phases | Schedule | Pay Items | Remarks | Approvals | PPMS

Approvals - Project ID 1234567

Approval Required [Request Approval]

Changes made to the project since previous approval are:

Field	Old Value	New Value
Proposed Letting Date	10/01/2011	12/01/2011

Routes Added:

County	Route	BMP	EMP	Work Type	Treatment Type
Abbeville	S- 74	0.000	13.080	Widening	

Routes Modified:

		County	Route	BMP	EMP	Work Type	Treatment Type
1	Old	Abbeville	S- 3	0.000	2.120	Preservation	Microsurfacing
1	New	Abbeville	S- 3	0.000	2.580	Preservation	Microsurfacing

Bridges/Railroads Added:

County	Route	Milepoint	Structure Number	Crossing Name/Number	Line/Milepost	Work Type	Treatment Type
Abbeville	SC 72	10.29	0140007240400	CALHOUN CREEK		Bridge	

Work Phase Funding Sources:

Phase	Program	Action	Proposed Obligation Date	Obligation Amount
Bridge	Bridge	Modify	08/2011	$250000.00
Road Construction	Widening	Modify	08/2011	$500000.00

Approval History

	Approval Requestor	Approval Status	Approval Date
+	Deere, John	Approved	6/6/2011
-	Deere, John	Approved	5/9/2011

Initiated By: John Deere
Initiated On: May 3, 2011 1:25:04 PM
Email Request Text:

Initial approval is required for Project ID 0354780

To review this project for approval please click on the link below
http://ps2server/P2S/Approval/ProjectID=0354780

Approvals:

Approver	Notification Date	Status	Approve/Deny Date
Doe, John	05/03/2011 1:25:04 PM	Approved	05/06/2011 9:54:03 AM
Name, Fake	05/06/2011 9:54:03 AM	Approved	05/06/2011 3:45:04 PM
Doe, Jane	05/06/2011 3:45:04 PM	Approved	05/09/2011 10:14:32 AM

Figure 49 - Approvals Tab - Project Requiring Approval

The Approvals tab contains the following sections:

- **Current Approval Process -** This section provides details on the status of the current approval process. This section is only included on the Approvals tab when the project is in the approval process. When shown, it is always located at the top of the Approvals tab. The following defines the fields within this section.

- **Cancel Approval Button** – This button is only available for the P2S user who initiated the approval process and for System Administrators. This button allows a user to cancel the approval process. When selected, the Cancel Approval interface is displayed. Details on the Cancel Approval interface are located later in this section.
- **Initiated By** – This is the name of the P2S user who initiated the approval process.
- **Initiated On** – This is the date and time at which the approval process was initiated.
- **Email Request Text** – This is the contents of the approval email which is sent to each approver for the project.
- **Approvals** – This section lists all the approvers for the project, the date/time when each was sent the approval request, the status of their approval and the date/time the user either approved or denied the approval of the project. The status values are Waiting Notification, In Review, Approved and Denied. If the status for a user is In Review, then two buttons will be displayed next to the user.
    - **Approve Button** – When selected, the user is denoting their approval of the project. The Approval Recipient Approve interface is displayed requiring the user to enter their 4-digit PIN value to verify the approval.
    - **Deny Button** – When selected, the user is denoting their denial of the project. The Approval Recipient Deny interface is displayed requiring the user to enter an explanation of why the project is denied along with the user's 4-digit PIN value.

  These two buttons will only be available for the current user who is reviewing the project for approval and also all system administrators. A system administrator will be allowed to select either of these buttons to approve or deny the project as proxy for the approver.
- **Changes Requiring Approval.** This section provides details on the changes made to the current project that require approval. This section is only included on the Approvals tab if the project is not currently in an approval process and is always located at the top of the Approvals tab. If no changes have been made that require approval then this section will state "No changes requiring approval have been made." Details will be included in this section for each change made to the project which requires approval. Work Phases which require approval are those where one or more funding transactions have an Obligation Status set to Proposed and Obligations Management has not been notified.

    - **Request Approval Button** – This button is only available for the P2S user who created the project and for system administrators. This button allows a user to initiate the approval process for the project. When selected, the Request Approval interface is displayed.

  Note that the Changes Requiring Approval section and the Current Approval Process section are mutually exclusive. That is, only one of these sections will be included on the Approvals table at any given time for a project.

  A Project may have its first approval process initiated only when it has one or more work phase funding sources defined. If a project has no work phase funding sources defined, then this will be denoted in the Changes Requiring Approval section and the **Request Approval** button will be disabled.

  Subsequent approval processes may be initiated at any time a change has been made to any of the fields denoted as requiring approval.
- **Approval History-** This section provides a chronological history of the prior approvals for the project. Approvals are sorted in this section so that the most recent approval process is shown at the top. If no

approval processes have been initiated for the project then this section will state "No previous approval processes exist for this project." The following defines the fields within this section.

- **Approval Requestor** – This is the P2S user who initiated the approval process.
- **Approval Status** – This is the overall status of the approval request. Valid values are Approved and Denied.
- **Approved Date** – If the project status is set to "Approved," then this is the date that the project was approved. If the project status is set to "Denied," then this is the date that the project approval was denied.

Each approval process entry may be expanded to see the details of the approval by selecting the "+" icon to the left of the approval process entry. When expanded, the following additional information will be displayed about the approval process:

- **Initiated By** – This is the name of the P2S user who initiated the approval process.
- **Initiated On** – This is the date and time at which the approval process was initiated.
- **Email Request Text** – This is the contents of the approval email which is sent to each approver for the project.
- **Approvals** – This section lists all the approvers for the project, the date/time when each was sent the approval request, the status of their approval and the date/time the user either approved or denied approval of the project. The valid status values in this section are Approved and Denied.

2.3.2.9 PPMS

The PPMS tab contains legacy identifying information about projects originating from PPMS. Whereas the PPMS system was "work phase" driven, the P2S system is "project" driven. As such, P2S no longer creates the same identifying information such as project suffix, file number, etc. However, so that users of the P2S system can still query and locate information by the legacy ID information, much of this data has been retained for viewing purposes only. The PPMS tab will only be visible for projects which once existed in PPMS. Below is a mockup of the PPMS tab:

Search | General | Roads | Bridges / RR Xings | Work Phases | Schedule | Pay Items | Remarks | Approvals | PPMS

Legacy PPMS Data

Superior PCN: 30616

PCN	Suffix	Termini From	Termini To	Length	Work Phase	File Number	Federal Prj. #
30615	X	BR OVER CONGAREE RIVER	10 MI NE OF ST. MATTHEWS	5.50	BR. CONST.	940.101B	BRTBR88042
30616	X	CALHOUN COUNTY LINE	INTERSECT OF CSX RAILROAD	5.50	RD. CONST.	9.123B	BR BR88042
30617	X	CALHOUN COUNTY LINE	INTERSECT OF CSX RAILROAD	5.50	R/W	9.123B	BR BR88042
30618	X	CALHOUN COUNTY LINE	INTERSECT OF CSX RAILROAD	5.50	PREL ENGR	9.123B	BRPBR88042
30619	X	CALHOUN COUNTY LINE	INTERSECT OF CSX RAILROAD	0.00	UTILITY	9.123B	BR BR88042
30628	X	BR OV CONGAREE SWAMP (#3)	7 MI S OF EASTOVER	3.80	BR. CONST.	40.224B.1	BRTBR88042
30629	X	BR OV CONGAREE SWAMP (#2)	6 MI S OF EASTOVER	0.00	BR. CONST.	40.224B.2	BRTBR88042
30633	X	BR OV CONGAREE SWAMP (#1)	5 MI S OF EASTOVER	3.80	BR. CONST.	40.224B.3	BR BR88042

Print | Export

Figure 50 - PPMS Interface

<u>Fields on PPMS Tab</u>

- **Superior PCN** – The highest level PCN to which multiple work phase PCN's have been associated.
- **PCN** – The PCN assigned to this location and phase of work.
- **Suffix** – The suffix is an additional identifying attribute assigned to the PCN. Most records will have "X" as the suffix but newer projects in PPMS may values in the suffix that refer to the phase of work and the number of times the project has been let (i.e. RD01, BR02, CP01, etc.).
- **Termini From** – The PPMS Termini From field for this PCN/Suffix pair.
- **Termini To** – The PPMS Termini To field for this PCN/Suffix pair.
- **Length** – The PPMS specified length for this project.
- **Work Phase** – The work phase for this project.
- **File Number** – The *first* PPMS assigned file number for this project. More than one file number may have been assigned to this PCN but only the first one is shown in P2S.
- **Federal Project Number** – The *first* federal project number used by this project. More than one may have been used but only the first one is shown in P2S.

2.4 Proposals

2.4.1 Overview

P2S provides the capability to build proposals for letting. The proposal will consist of a Proposal ID, an associated project or set of projects, and other pertinent information such as project location and pay item estimate data. A proposal exists in P2S from its creation (i.e. when projects are associated with it) until contract award. The proposal section of P2S exists to aid in letting preparation and to facilitate the integration of this data with Web Trns*port where the letting actually occurs. The proposal section of P2S helps to collate and manage information in P2S for a letting prior to its transmission and subsequent manipulation in Web Trns*port. Proposals can be created and modified in P2S by associating and/or disassociating projects from it.

The menu for the proposal section is shown below:

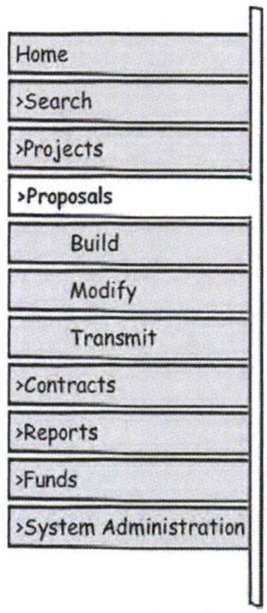


Figure 51 - Menu Options for Proposals

2.4.2 Build Proposal

The Build Proposal capability in P2S facilitates proposal creation and the association of projects to a proposal. Users will search P2S for existing projects using defined criteria. From the search results, users can select one or more projects to become part of the new proposal. Projects that have been previously assigned to a proposal will be automatically filtered from the results. Projects without an assigned Proposed Let Date will also be filtered from the search results. Once the project selection is complete, a proposal description is entered and the **Build Proposal** button is selected to generate the proposal. At this time a Proposal ID is generated by the system.

- **Proposal ID** - The Proposal ID is created and assigned at proposal creation. This ID will become the Contract ID once the proposal has been awarded. It is a system generated seven (7) digit number created according to the following naming convention:

  <u>Proposal ID</u>: ccuuuur
  cc = two digit county
  uuuu = 4 digit unique identifier
  r = 1 digit revision (begins at 0)

Special rules are followed for the first 2 digits. These rules are:

1. If only one county is involved, the first 2 digits are the county number.

2. If more than one county is part of the proposal, and all counties are from the same district, the following rules apply: District 1 is denoted as 51, district 2 is denoted as 52, district 3 is denoted as 53, etc.
3. If more than one county is part of the proposal and they are not in the same district, the statewide designation of 50 is used.

Please take note of the following regarding projects and proposals:

- Projects that have been previously assigned to a proposal will be automatically filtered from the Build Proposal search results and therefore will not be displayed in the Available Projects list.
- Projects without an assigned Proposed Let Date will also be filtered from the search results and therefore will not be displayed in the Available Projects list.
- If multiple projects are assigned to the same proposal, all must be assigned the same Proposed Let Date. The system will make this validation when projects are added to the list, and the user will be alerted. A project's Let Date can be modified on the General Tab.
- A specific user permission for "Build Proposal" will be added to the system, and can be assigned through System Admin procedures.

The mockup below shows the Build Proposal screen:

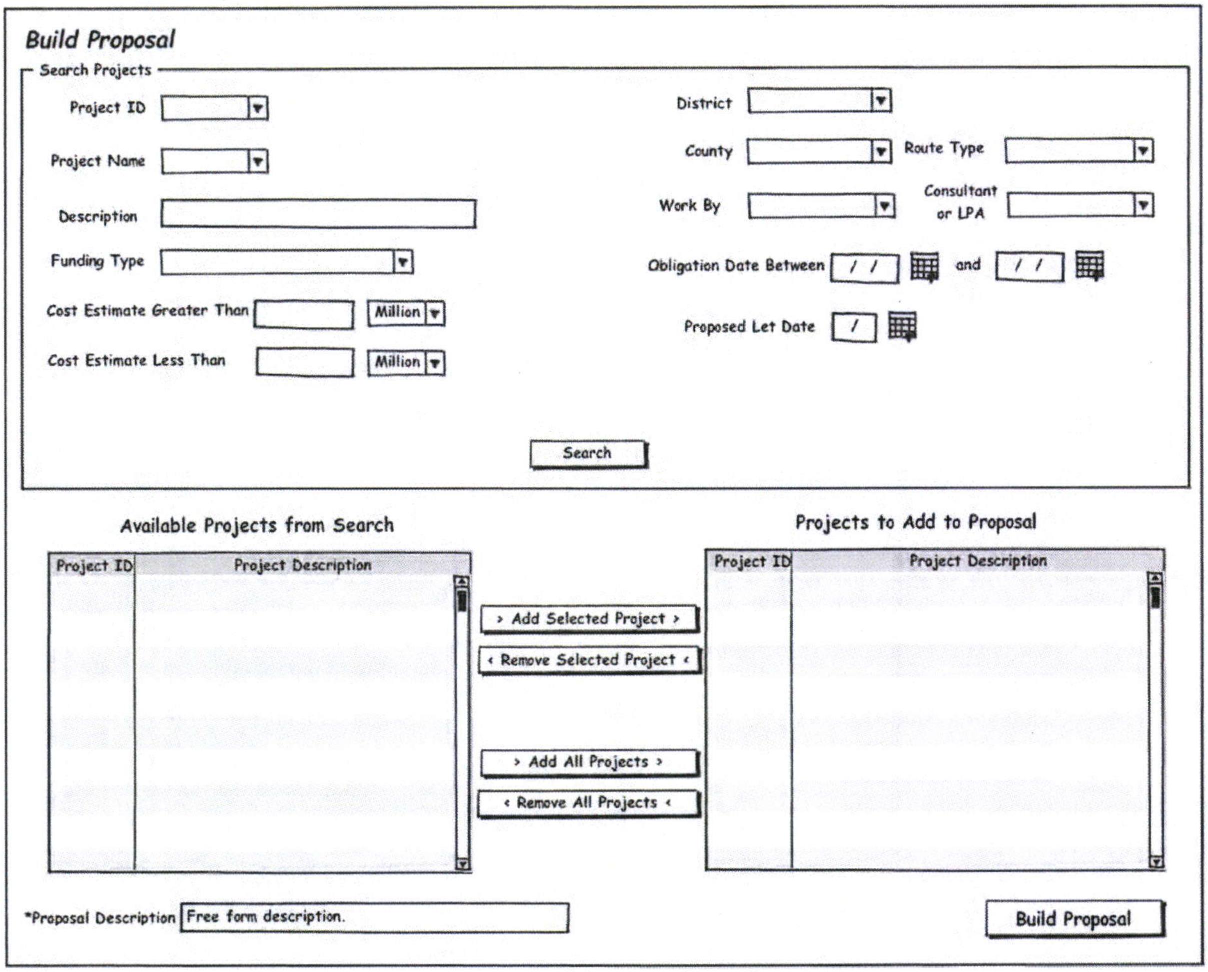


Figure 52 - Build Proposal Interface

The following fields are available for entering information to be used as criteria for the project search:

- **Project ID** - This is a drop down list of all Project IDs.
- **Project Name** – This is a drop down list of project names.
- **Description** – This is a free form key-in field. A wild card search will be executed on whatever text is entered. For example, if the user enters only the text "Rehabilitation," any project with the word Rehabilitation will be shown in the results.
- **Funding Type** – This is a drop down list containing the funding types available for selection.
- **Cost Estimate Greater Than** – This is a free form key-in field to set a search threshold to locate projects with values greater than the amount entered.
- **Cost Estimate Less Than** – This is a free form key-in field to set a search threshold to locate projects with values less than the amount entered.
- **District** – This is a drop down list containing the names of the Engineering Districts.
- **County** – This is a drop down list containing all counties in South Carolina.
- **Route Type** – This is a drop down list containing the list of available route types for selection.

- **Work By** - This is a drop down list which identifies the party performing the work. The three options are:
  - **SCDOT**
  - **Consultant Firm**
  - **Local Public Agency (LPA)**
- **Consultant or LPA** – This is a drop down list containing names for the consultant or LPA.
- **Obligation Date Between** – These are two key-in date fields for locating projects between them.
- **Proposed Let Date** – This is a month/year key-in date field for the proposed let date.

Once criteria are entered, the **Search** button is selected and the results of the search are displayed in the "Available Projects from Search" window in the lower left half of the interface. The user can then select projects to add to the proposal using the available buttons. When a project is selected to be added to the proposal it is removed from the Available Projects list and placed in the Projects to Add to Proposal list in the lower right half of the interface.

The following buttons and fields are available for further input and data manipulation on the search results:

- **Add Selected Project** – This button moves the highlighted project from the Available list to the Add list.
- **Remove Selected Project** – This button moves the highlighted project from the Add list back to the Available list.
- **Add All Projects** – This button moves all projects in the Available list to the Add list.
- **Remove All Projects** – This button moves all projects from the Add list back to the Available list.
- **Proposal Description** – This is a free form key-in field for the proposal description. This field is required.
- **Build Proposal** – This button creates the proposal by creating and assigning a Proposal ID and associating all projects in the Projects to Add to Proposal list to the Proposal ID. Once this button is selected and confirmed, the proposal is built and the user is brought to the proposal General tab described in section **Error! Reference source not found.**.

2.4.3 Modify Proposal

The Modify Proposal capability allows users with permission to change which projects are associated with a proposal. The project association changes are managed through an interface similar to Build Proposal discussed in the previous section. The user first locates the proposal to modify by entering search criteria. Note that the proposal search will only locate existing proposals that have not yet been transmitted to Web Trns*port.

The Search Proposal interface is shown below:

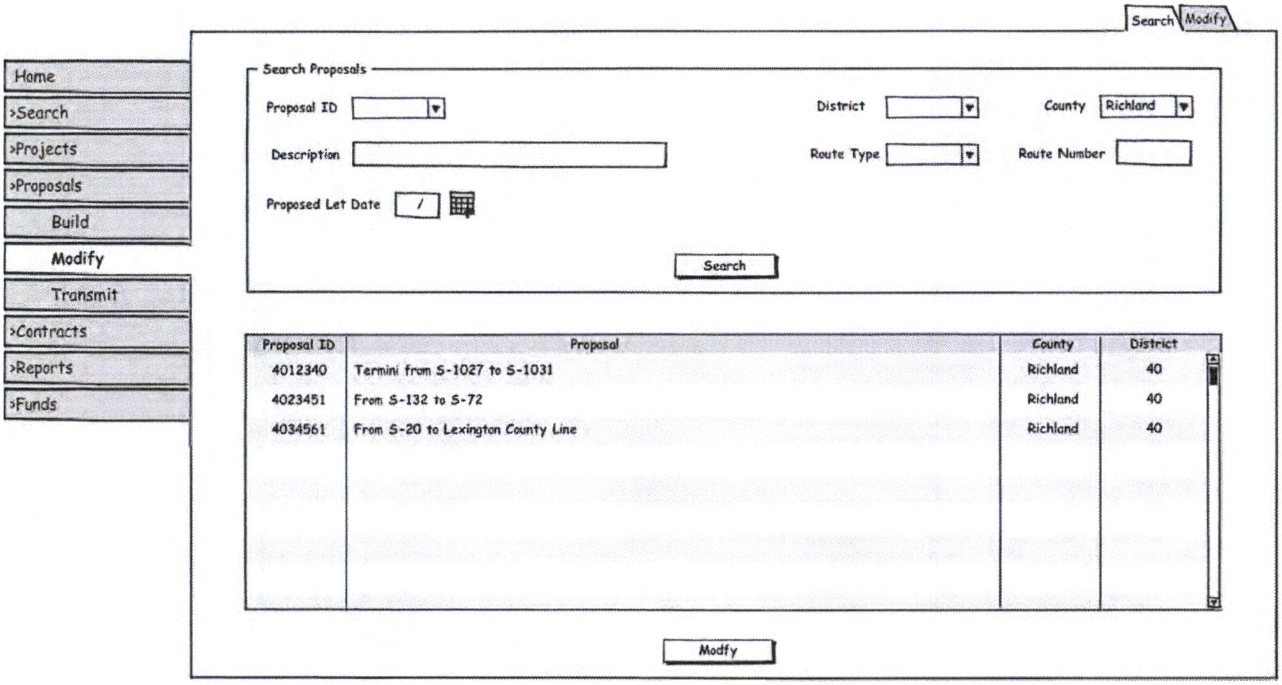


Figure 53 - Proposal Search Interface

Once a proposal is selected from the search screen and the **modify** button is selected, the Modify Proposal interface is populated with the projects that are currently associated with the proposal. These projects are displayed in the Projects to Add to Proposal section located in the bottom right of the interface. From this point, users are able to add and/or remove projects from the proposal.

The Modify Proposal interface is shown below:

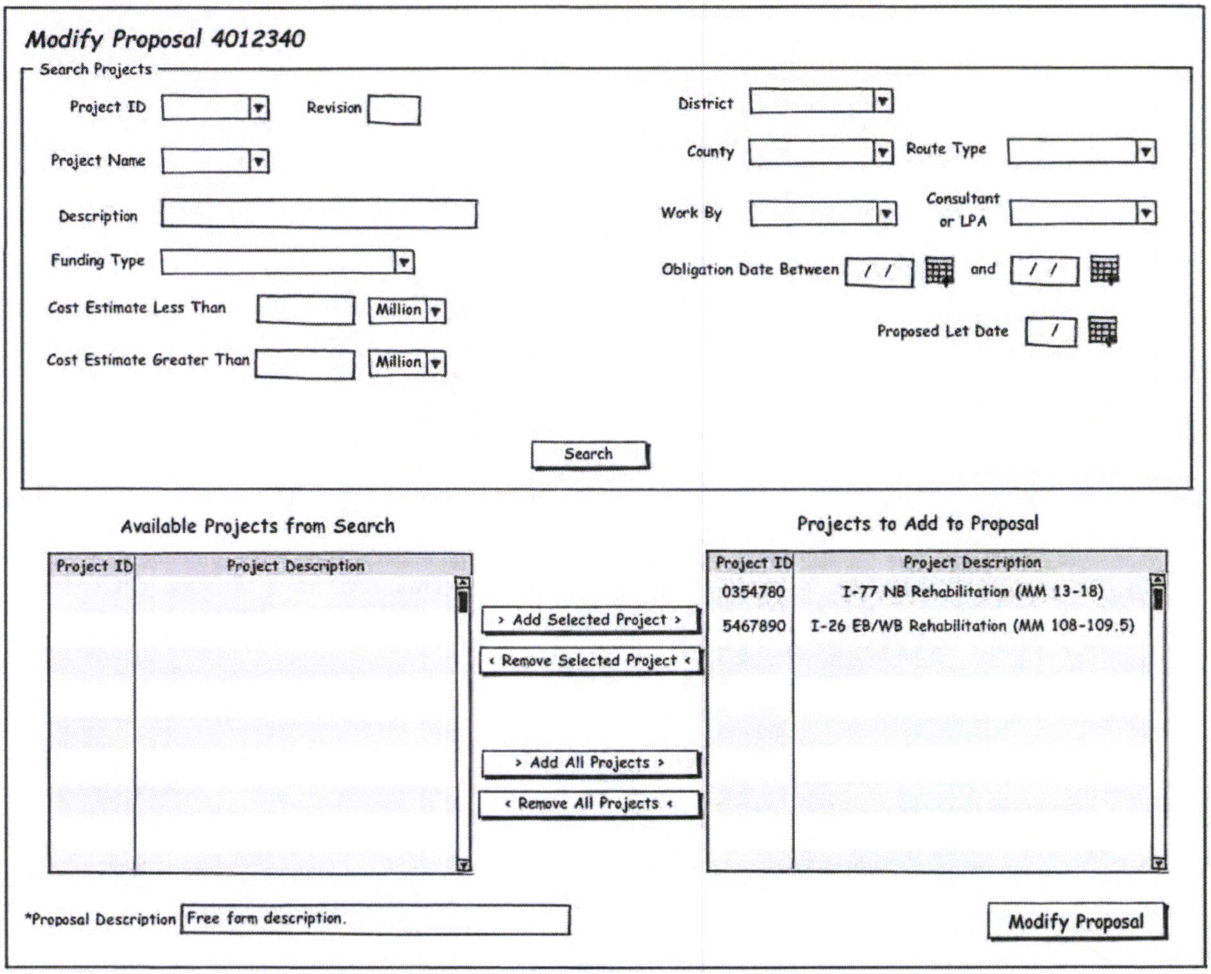


Figure 54 - Modify Proposal Interface

Once modifications are complete, the user selects the **Modify Proposal** button to save all changes. At this time the Modify Proposal screen is exited and the proposal General tab is displayed for the recently modified proposal.

2.4.4 Transmit Proposal

P2S provides the ability to transmit proposals and associated projects to Web Trns*port for letting. The Transmit Proposal interface is used to facilitate the management of proposals for a specific letting as well as the transmission of the information into Web Trns*port. The interface allows users with appropriate permissions to obtain a list of proposals for a specific letting by first choosing a Proposed Let Date. Once this date is established, the system will return all existing proposals in P2S whose projects match the let date chosen.

Information is included in the resulting proposal list to aid the user in determining which proposals are ready for transmission, and which have been previously transmitted along other pertinent information. When a proposal is transmitted to Web Trns*port, necessary project information associated with the proposal is transmitted including pay items previously entered into P2S. Note that proposals for the same letting may be transmitted at different times. This capability is provided understanding that not all proposals may be ready for transmission at the same time, but those that are ready can be transmitted to allow work in Web Trns*port.

Important things to note:

- Proposals for the same letting can be transmitted at different times.
- All projects associated with a single proposal must be transmitted at the same time.
- Users can only view proposals for a letting that have been previously transmitted. No changes are allowed.
- Once a proposal has been transmitted to Web Trns*port, changes for any transmitted information will not be allowed.

The mockup below shows the Transmit Proposal interface:

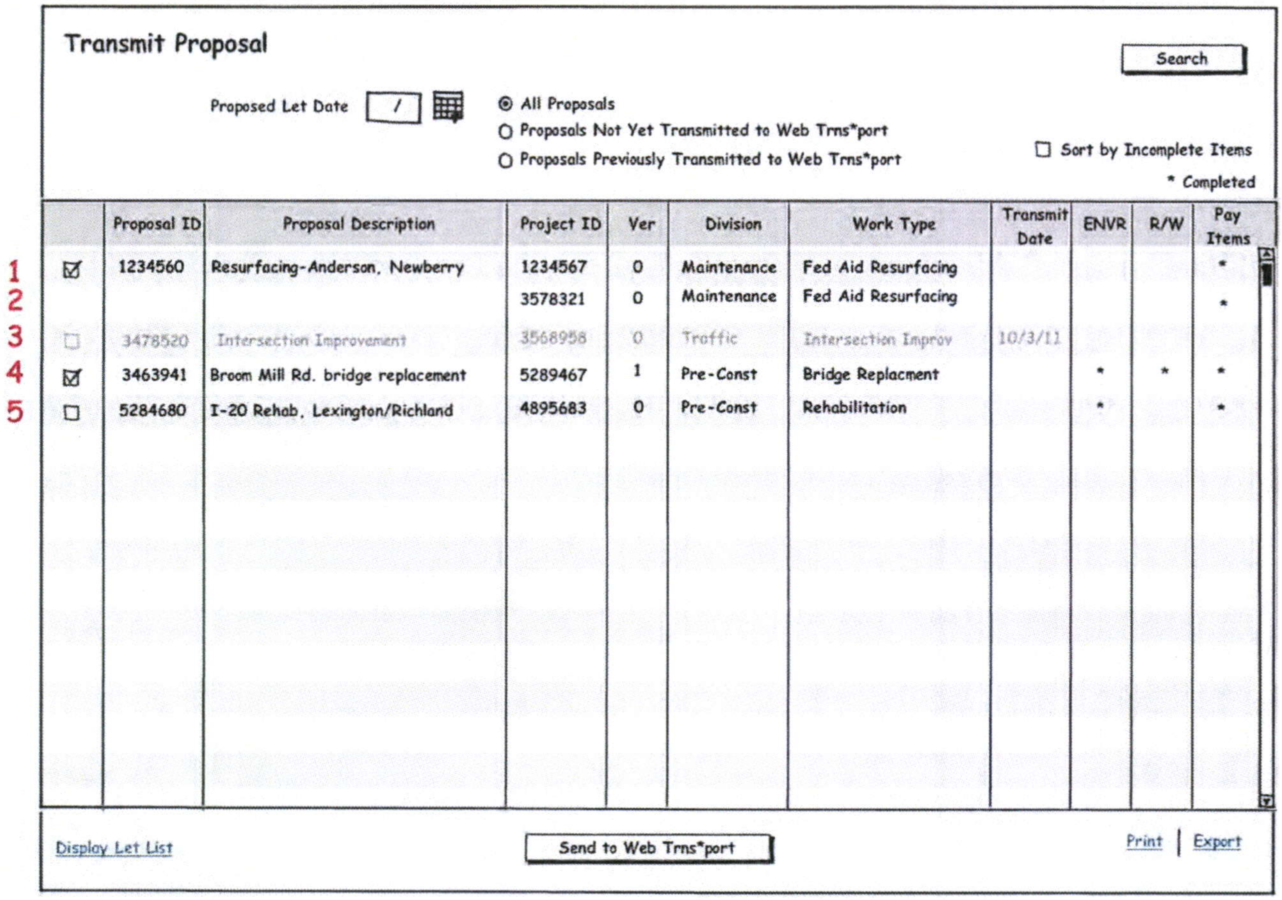


Figure 55 - Transmit Proposal Interface

The following filter and sort options exist for locating and displaying proposals that match the entered Let Date:

- **All Proposals** – This radio button displays all proposals that match the Let Date regardless of any other settings.
- **Proposals Not Yet Transmitted to Web Trns*port** – This radio button displays all proposals that match the entered Let Date and that have not been previously transmitted to Web Trns*port.

- **Proposals Previously Transmitted to Web Trns*port** – This radio button displays all proposals that match the entered Let Date and that have been previously transmitted to Web Trns*port.
- **Sort by Incomplete Items** – When this option is checked, proposals lacking ENVR approval,R/W certification, or pay items will be shown at the top of the list. ENVR is determined from reading approved date values from Primavera. This field is shown on the Work Phases tab. R/W certification will be determined by reading from the R/W system. Lastly, Pay Items will be read from an indicator on the Pay Items tab.

The following information is displayed for the search results:

- **Check Box** – This indicates that the proposal is selected for transmission to Web Trns*port.
- **Proposal ID** – This field displays the unique identifier for the proposal.
- **Proposal Description** – This field contains the description of the proposal entered when the proposal was built.
- **Project ID** – This field displays the unique identifier for the project.
- **Ver** – This field displays the version number for the project.
- **Division** – This field displays the division responsible for the project.
- **Project Type** – This field displays the work type of the project.
- **Transmit Date** – This field displays the date of transmission for a proposal. If the proposal has not yet been transmitted, no date appears in this field.
- **ENVR, R/W, Pay Items** – An asterisk (*) in any of these fields indicate that the responsibility has been met for certification or approval to transmit pay items.

The search results shown in the mockup above reveal how P2S manages specific cases regarding transmission. The explanation that follows references the red numbers identifying rows in the mockup.

- **Row 1** – This row of data represents a proposal with a Maintenance project associated with it. It has not been previously sent to Web Trns*port since no Transmit Date is shown. ENVR and R/W certificates have not been obtained, but Pay Items have been approved to be transmitted. This proposal is checked and is ready to go. It will be transmitted when the **Transmit** button is selected.
- **Row 2** – This row of data represents a project associated with the proposal listed in row 1 since there is no proposal ID or description listed next to the project in its own row. Therefore, the proposal listed on row 1 has two projects associated with it.
- **Row 3** – This row represents a proposal that has been previously transmitted to Web Trns*port. It is disabled, and the Transmit Date is shown. This proposal is unable to be selected for transmission since it already exists in Web Trns*port.
- **Row 4** – This row represents a proposal which is being re-let, evidenced by the "1" as the last digit of the Proposal ID. Note that the Project ID's version number is set to 1 as well indicating a re-let. This proposal has received all necessary information for ENVR, R/W and Pay Items. The check box is selected for transmission. This proposal is ready to go.
- **Row 5** – This row represents a proposal for a rehab project. The project is ready to be transmitted, but the check box is not selected. This proposal will not be included in the transmission.

The following buttons and links are available on the Transmit Proposal interface:

- **Transmit to Web Trns*port** - This button will transmit selected proposals to Web Trns*port via a web service described later in this section. The user will be asked to confirm the transmission prior to processing.

- **Display Let List** – This link displays the let list for the entered Proposed Let Date field.
- **Print** – This link prints the search results.
- **Export** – This link exports the search results to Excel.

2.4.5 Re-lets and Withdrawn/Rejected Proposals

P2S will work in conjunction with Web Trns*port to manage proposals that are withdrawn or rejected from a letting. Associated projects which subsequently require to be re-let are also managed.

- *Note: At the time of this writing, it is unclear exactly how the integration between P2S and Web Trns*port will occur. This design assumes that Web Trns*port will notify P2S that a proposal has been rejected or withdrawn.*

Once P2S becomes aware of the withdrawn or rejected proposal, the following actions will occur:

1. The proposal will be duplicated with the duplicate proposal's revision digit incremented by 1.
2. The original proposal will no longer allow modifications.
3. Each project will be duplicated with the duplicate project's Revision number incremented by 1.
4. Each original project will no longer allow any modifications.
5. Each original project will contain a remark indicating that it has been withdrawn or rejected from a letting.
6. The Proposed Let Date for each revised project will be cleared.
7. The program manager for each project associated with the withdrawn or rejected proposal will be notified of the situation.

- ***Modifying Re-let Proposals** – If projects are added or removed from a re-let proposal:*
    - *The user will be alerted that this modification constitutes a new proposal, and a new Proposal ID will be assigned.*
    - *The new Proposal ID will be assigned when the modifications are saved.*
- ***Revision Numbers** – P2S will always use by default the version of a project with the highest Revision number. For example, all project searches will locate and display the highest revision of a project.*

2.4.6 Integration with Web Trns*port Notes and Considerations

The entire proposal transmission capability and re-let management in P2S is totally dependent on integration with Web Trns*port 2.0. While discussions have begun, the end results and details of the integration will not be realized for quite some time. This design is entirely dependent on the outcome of these discussions and subsequent implementation by all parties necessary.

From our perspective, we suggest the following to aid with integration between Web Trns*port 2.0 and P2S:

1. Functionality exist allowing P2S to serve up all pertinent proposal and project information for input into Web Trns*port for further editing and subsequent letting. Much information will require to be transmitted and the details are currently TBD. See the table below containing anticipated data items. We suggest that a web service created by InfoTech would be the best solution to facilitate this capability.

2. Functionality be added to Web Trns*port to notify P2S when a proposal has been withdrawn or rejected. We suggest a trigger on a database field in Web Trns*port that would initiate contact with a P2S web service created by PMG.
3. Functionality allowing P2S to retrieve pay item information from Web Trns*port. We suggest a web service created in Web Trns*port by InfoTech.

P2S Data to Transfer to Web Trns*port

It is anticipated that data in the following table will be required to be transferred from P2S into Web Trns*port. This table shows the relationship between the current PES/LAS field names and the P2S logical field names.

PES/LAS Field Name	P2S Field Name	Comment
Project Number	Project ID (whatever this is eventually called)	System Generated
Proposal ID	Contract ID (2 digit location identifier, 4 digit system generated, 1 digit letting number)	System Generated "Smart" Number
Spec. Year	Spec. Year	Dropdown (populate from PES table?)
Fed/State Project No	Same as Project Identifier	System Generated
Description	Project Description	Text Field
Location	Concatenate Termini From and To	Text Field
Unit System	Unit System (default to E)	Dropdown (populate from PES table?)
Road Name	Name of predominant route.	
Route	Concatenate Route Type, Route Number, & Route Auxiliary	Text Field
District (Engineering)	District	Dropdown
Beginning Station	Beginning Station	Text Field
Ending Station	Ending Station	Text Field
Percent of Project Length	Percent of Project Length	Percentage (check that they equal 100?)
Category Number	Category Number	System Generated
Category Description	Category Description	Dropdown
Federal Construction Class	Federal Construction Class	Dropdown (populate from PES table?)
Category Length	Category Length	Decimal Field
Bridge ID	Bridge Structure Number	Dropdown from Route Information
Bridge Length	Bridge Length	Populated?
Item Number	Item Number	Dropdown (populate from PES table)
Estimated Quantity	Estimate Quantity	Number Field
Supplemental Description	Supplemental Description	Number Field

Table 9 - PES/LAS and P2S Logical Field Names

2.5 Contracts

Within the Contracts section of P2S there are several tabs containing different types of information pertaining to the selected contract. All of these tabs are described in detail in following sections. They are:

- **General** – This tab contains high level information pertaining to the contract, including all projects making up the contract.
- **Letting** – This tab contains information about the contract vendors and bid amounts.
- **Bid Items** – This tab contains estimates of the prices of contract materials.
- **Contract Status** – This tab contains information about the contracting company, the bonding agent and the status of the contract.
- **Location** – This tab lists the routes, bridges and railroad crossings included in the contract.
- **Contract Management** – This tab contains information about the contract Resident Engineers, Contracting Company, and Bonding Agent.
- **Change Orders** – This tab contains a list of all of the change orders that have been applied to the contract.
- **Claims** – This tab contains information pertaining to contract claims.

A majority of these tabs are designed to mimic the functionality of the CARD File application. These include the Contract Status, Contract Management, Change Orders, and Claims tabs. While most data for a Contract is read-only information retrieved from Site Manager and Web Transport, some fields are maintained in P2S and are editable. The Contracts=>Modify interface allows users with Contract Superuser privilege to modify these fields.

2.5.1 Modify Contracts

The user may enter the Modify Contracts section of P2S by selecting the "Modify" menu item from the Contracts menu. This will open a search screen enabling the user to search for and select a contract to be modified.

The mockup below shows the search screen:

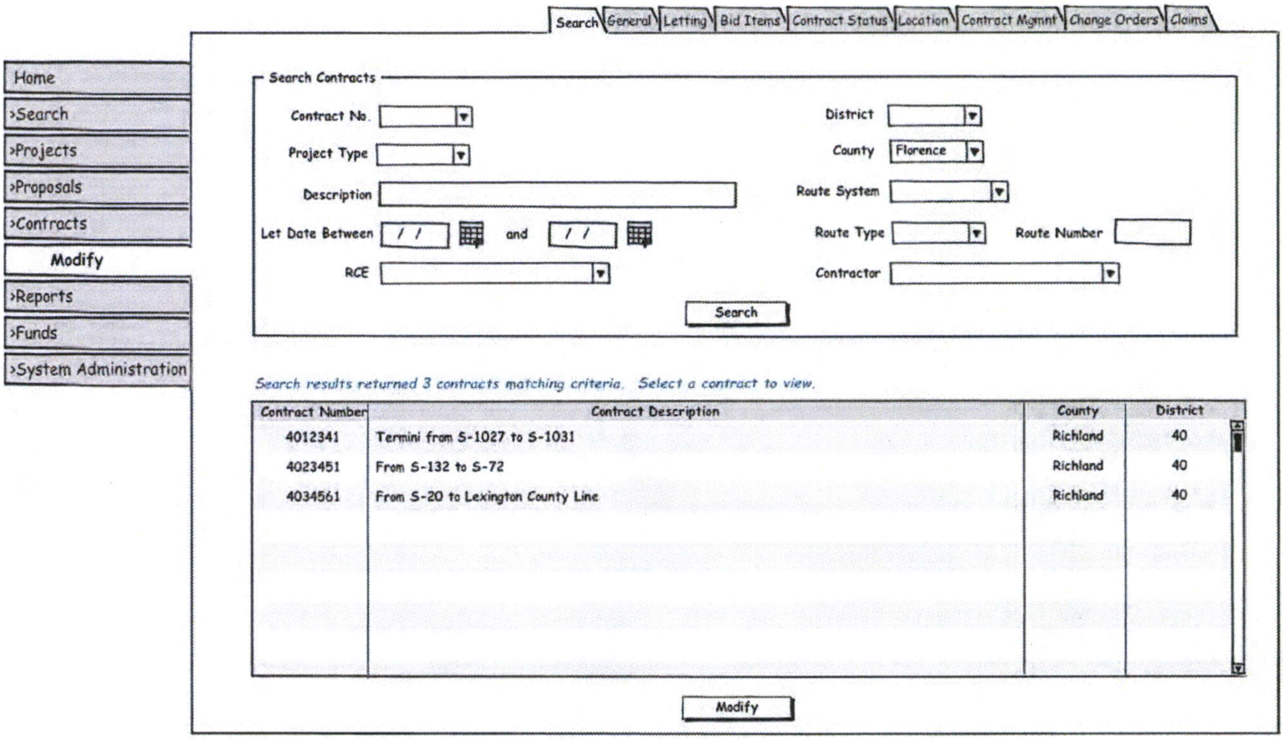


Figure 56 - Search Contracts Interface

The following fields are available for entering information to be used as criteria for the contract search:

Contract No. – This drop-down box is a list of all of the contract ID numbers in the system.

Project Type – This drop-down box is a list of project types.

Description – This text box allows the user to type in a contract description. A "wildcard" search is performed on the entered text.

Let Date Between- This is a date range locating contracts having a let between the dates entered. If only the first date is entered, all contracts having the let date greater than or equal to this date will be returned.

RCE – This drop down box is a list of each Resident Construction Engineer (RCE) in the system.

District – This drop down box is a list of Districts 1-7.

County – This drop down box is a list of counties in South Carolina.

Route System – This drop down box contains the route systems of Interstate, Primary, and Secondary.

Route Type – This drop down box is a list of route types. The available route types include Interstate, US, SC, Secondary, and Local.

Route Number – This numeric entry field allows the user to type in a route number.

Contractor – This drop down box contains a list of all of the contractors in the system.

The functions on this screen are as follows:

Search – This button will display a table of search results in the lower portion of the screen. The user will have the option to select one contract from the table to view its details.

View – This button will be enabled after the user highlights a contract in the table of search results. Selecting it will populate the tabs across the top of the screen with information about the selected contract, and take the user to the General Tab.

Tab Header Information

Every tab in the Search Contracts section of P2S has a header at the top with the same overview information about the contract.

The following table lists the data source for each field included in the header:

Field	Source Database	Column Definition	Description
Contract ID	P2S	ContractDetail.ContractID	This is a 7 digit number made up of ccuuuuv (county, unique number and version).
Project IDs	P2S	ProjectDetail.ProjectID	All project ID's included in the contract.
Counties	P2S	ProjectRoute.CountyID and ProjectCounty,CountyID	All county names for each project included in the contract.
Districts	P2S	ProjectDistrict.DistrictID	All districts for each project included in the contract.
Programs	P2S	ProjectFundingTransaction.LUProgramI D	All programs for each project included in the contract.
Let Date	WebTransport	TBD	Let date of contract.
Award Date	WebTransport	TBD	Award date of contract.

Table 10 - Data Source for Headers

2.5.1.1 General Info

Once the user selects a contract returned from the search and selects the **Modify** button, all of the tabs will be populated with data for that contract. The General tab is the first tab shown.

The following mockup shows this tab with example data:

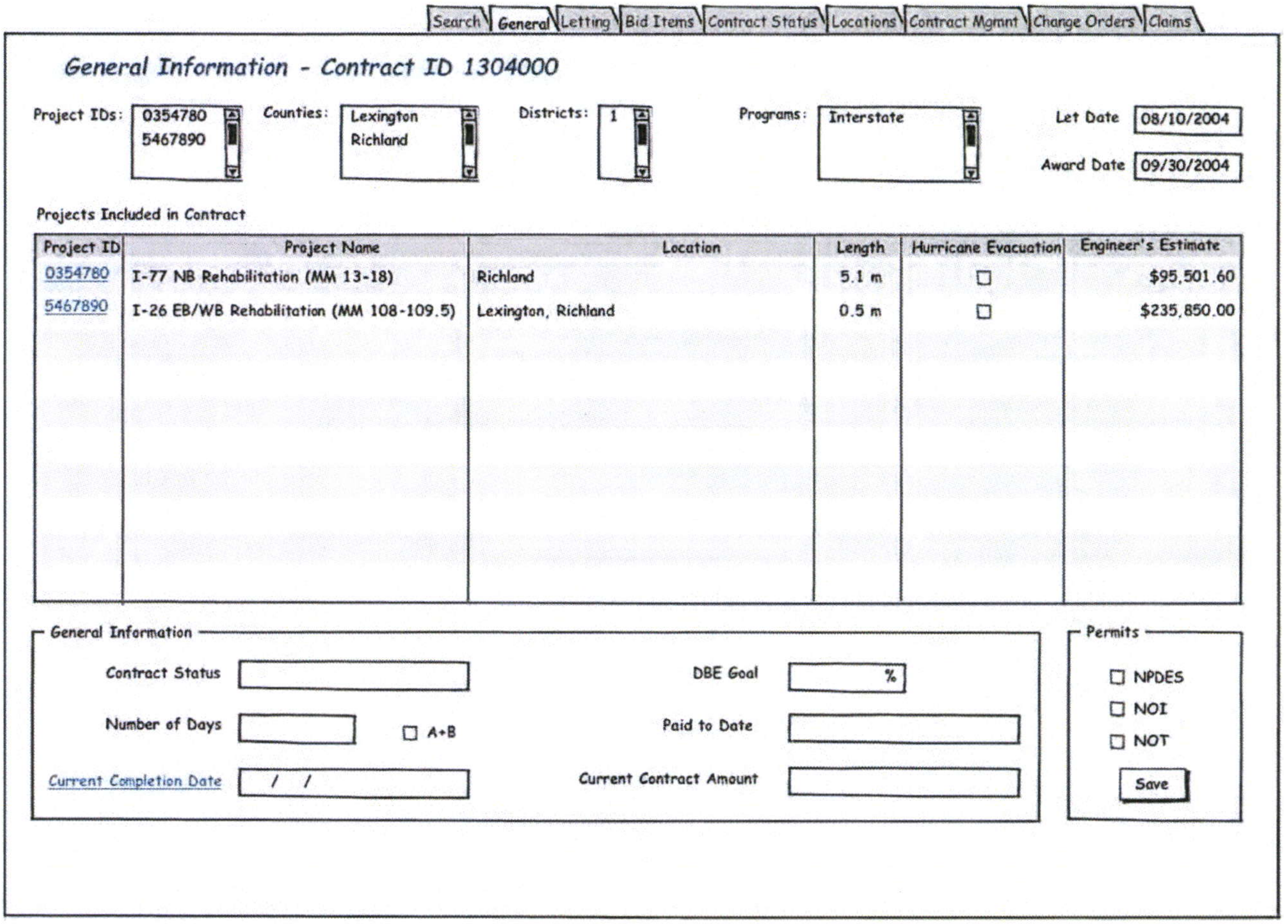


Figure 57 - General Tab

Below the header section are the projects included in the current contract. The system will do a query to find all projects associated with the contract and list them in this area. The columns in this table include:

Project ID – The user may click on any Project ID number to open a pop-up window showing the summary report for the selected project.

Project Name – The name of the project.

Location – The Location field is a comma separated list of counties or districts included in the project.

Length – Total number of miles for all route segments included in project.

Hurricane Evacuation – If this checkbox is selected, at least one route in the project is on a hurricane evacuation route.

Official Engineer's Estimate – Only users having permission to view the Official Engineer's Estimate, as assigned through User Maintenance, will see this column.

The following table lists the data source for each textbox on the General tab:

Field	Source Database	Column Definition	Description
Contract Status	SiteManager	DBAT.T_CONT.STAT_T	Status of the Contract.
Number of Days	Web Trns*port	TBD	
A+B	WebTrns*port	TBD	
Current Completion Date	SiteManager	SELECT DBAT.T_CONT_CRIT_DT.CONT_ID, DBAT.T_CONT_CRIT_DT.CRIT_DT_T, DBAT.T_CONT_CRIT_DT.ACTL_DT FROM DBAT.T_CONT_CRIT_DT WHERE (((DBAT.T_CONT_CRIT_DT.CRIT_DT_T) ="ADJC"))	This revised completion date. The label for this field is a hyperlink, allowing the user to view the Change Orders tab, filtered by Time Adjustments.
DBE Goal	Site Manager	DBAT.T_CONT.DBE_GOAL_P	Disadvantaged Enterprise Business (DBE) target percent.
Paid to Date	SiteManager	SELECT DBAT_T_CONT.CONT_ID, Sum(DBAT_T_CONT_EST.CUR_AMT_PD) AS SumOfCUR_AMT_PD FROM DBAT_T_CONT_EST INNER JOIN DBAT_T_CONT ON DBAT_T_CONT_EST.CONT_ID = DBAT_T_CONT.CONT_ID GROUP BY DBAT_T_CONT.CONT_ID	The amount paid to date.
Current Contract Amount	SiteManager	See "Revised Contract Amount" shown on the Amounts/Revs Tab.	Original Contract Amount + Total Change Order .
NPDES	P2S	ContractDetail.ContractNPDES	Checked if the contract requires a Pollutant Discharge Elimination System (NPDES) permit. A Contracts Superuser may edit this field.
NOI	P2S	ContractDetail.ContractNOI	Checked if a Notice Of Intent (NOI) has been submitted for the contract. A Contracts Superuser may edit this field.
NOT	P2S	ContractDetail.ContractNOT	Checked if a Notice Of Termination (NOT) has been submitted for the

			contract. A Contracts Superuser may edit this field.

Table 11 - General Tab Textbox Data Source

2.5.1.2 Letting

The Letting tab lists information about the vendors that bid on the contract and their bid amounts. The following mockup shows this tab with example data:

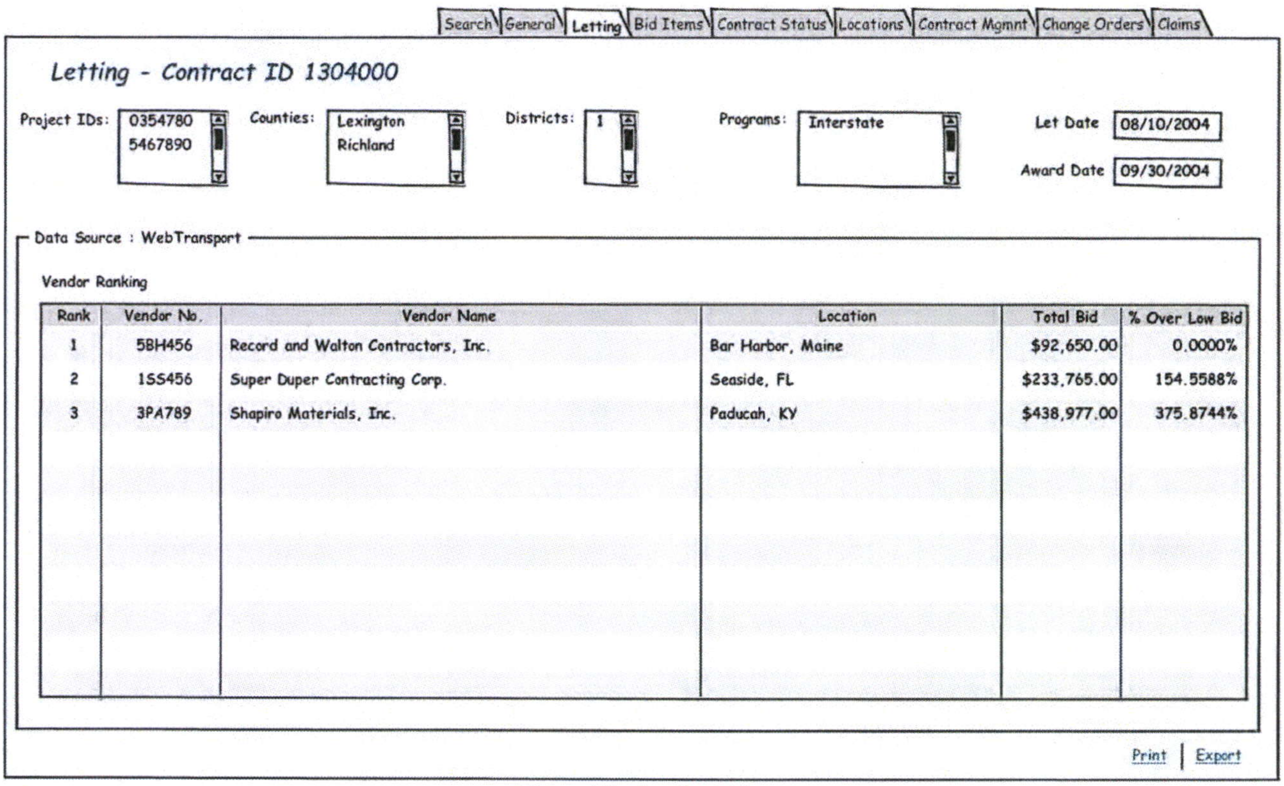


Figure 58 - Letting Tab

The textboxes and data table on this screen contain read-only information retrieved from Web Trns*port. The letting and award dates are shown above the table. The table lists each vendor and their total bid amount. The lowest bid is ranked first and placed at the top of the list. Each successively higher bid is listed below it along with the percent it goes over the lowest bid.

The following table lists the data source for each field on the Letting tab:

Field	Source Database	Column Definition	Description
Rank	Web Trns*port	TBD	Rank of bids with 1 being the lowest bidder
Vendor No.	Web	TBD	Vendor

	Trns*port		number
Vendor Name	Web Trns*port	TBD	Vendor name
Location	Web Trns*port	TBD	City and state of the vendor
Total Bid	Web Trns*port	TBD	Total bid
% Over Low Bid	Web Trns*port	TBD	% Over low bid

Table 12 - Letting Tab Data Source

2.5.1.3 Bid Items

The Estimates tab lists the estimates of the prices for materials that will be used under the contract. The pay items listed on this tab will list combined estimates for identical item numbers for each project.

The following mockup shows this tab with example data:

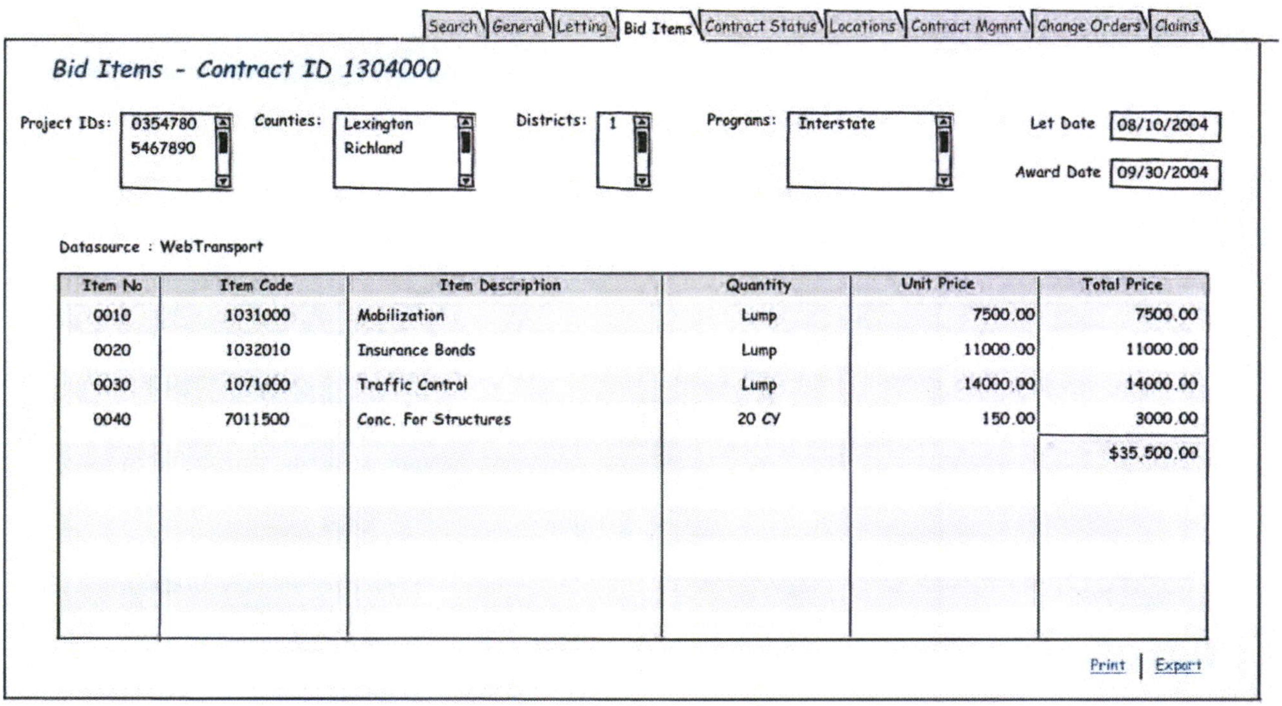


Figure 59 - Bid Items Tab

This screen contains read-only information retrieved from Web Trns*port. It lists all of the pay items, their estimated quantities and estimated costs. These amounts are summed to reach the total estimate.

The following table lists the data source for each field on the Bid Items tab:

Field	Source	Column Definition	Description

	Database		
Item No.	Web Trns*port	TBD	Line Item number
Item Code	Web Trns*port	TBD	Item Code
Item Description	Web Trns*port	TBD	Item Description
Quantity	Web Trns*port	TBD	Number of items
Unit Price	Web Trns*port	TBD	Estimated price per item
Total Price	N/A	N/A	This is the Quantity multiplied by the Unit Price (or the Unit Price if the Quantity is "Lump").

Table 13 - Bid Items Tab Data Source

2.5.1.4 Contract Status

The Contract Status tab shows detailed information about the dates and amounts associated with the contract. The following mockup shows this tab with example data:

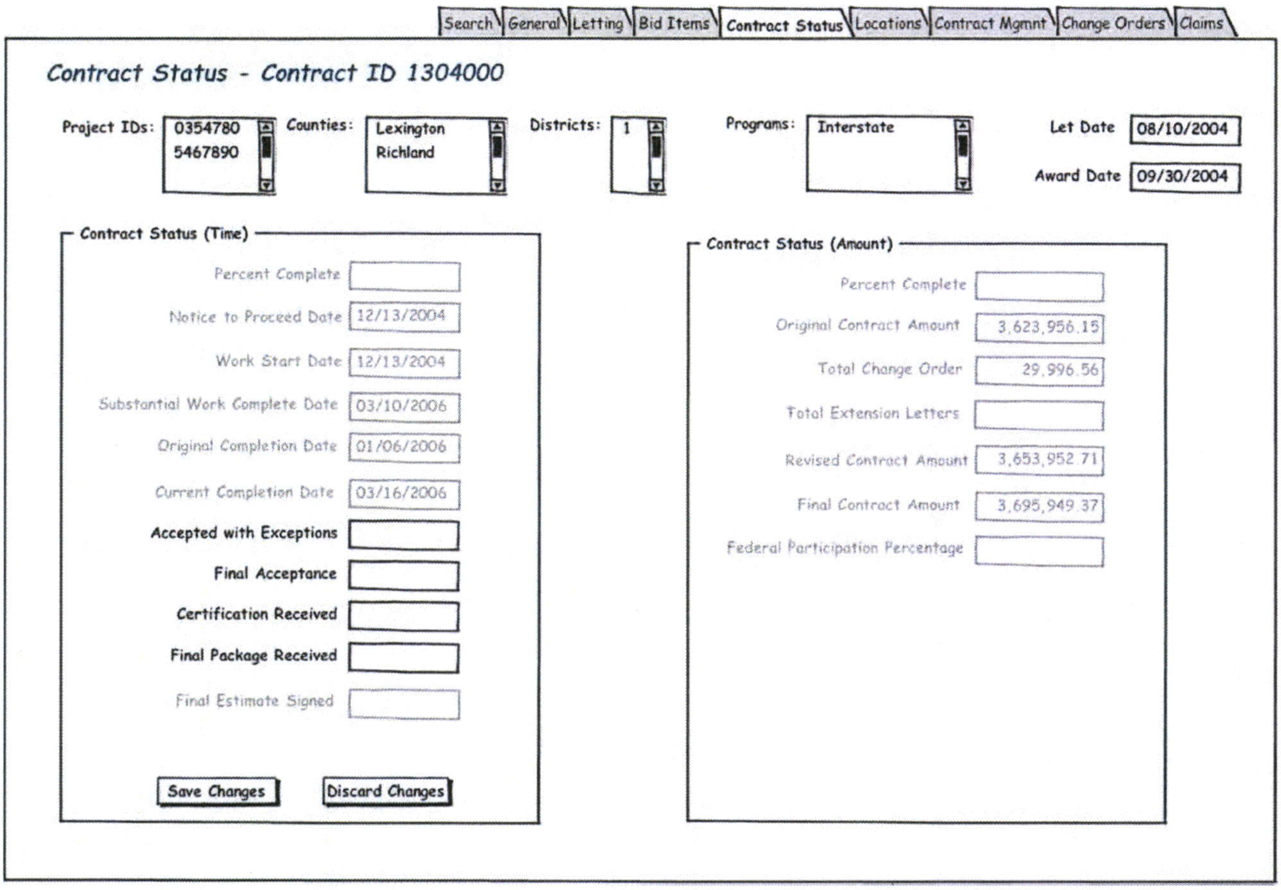


Figure 60 - Contract Status Tab

The following table lists the data source and column definition for each field on the Contract Status tab:

Field	Editable	Source Database	Column Definition	Description
Percent Complete	No	Site Manager		Percentage of contract completed by date.
Notice to Proceed Date	No	SiteManager	SELECT DBAT.T_CONT_CRIT_DT.CONT_ID, DBAT.T_CONT_CRIT_DT.CRIT_DT_T, DBAT.T_CONT_CRIT_DT.ACTL_DT FROM DBAT.T_CONT_CRIT_DT WHERE (((DBAT.T_CONT_CRIT_DT.CRIT_DT_T)="NTPD"))	Notice to proceed date
Work Start Date	No	SiteManager	SELECT DBAT.T_CONT_CRIT_DT.CONT_ID, DBAT.T_CONT_CRIT_DT.CRIT_DT_T, DBAT.T_CONT_CRIT_DT.ACTL_DT FROM DBAT.T_CONT_CRIT_DT WHERE DBAT.T_CONT_CRIT_DT.CRIT_DT_T="WKBG"	Work start date
Substantial Work Complete	No	SiteManager	SELECT DBAT.T_CONT_CRIT_DT.CONT_ID, DBAT.T_CONT_CRIT_DT.CRIT_DT_T, DBAT.T_CONT_CRIT_DT.ACTL_DT FROM DBAT.T_CONT_CRIT_DT WHERE	Substantial work complete

Field	Editable	Source Database	Column Definition	Description
Date			(((DBAT.T_CONT_CRIT_DT.CRIT_DT_T)="SWKC"))	date
Original Completion Date	No	SiteManager	SELECT DBAT.T_CONT_CRIT_DT.CONT_ID, DBAT.T_CONT_CRIT_DT.CRIT_DT_T, DBAT.T_CONT_CRIT_DT.ACTL_DT FROM DBAT.T_CONT_CRIT_DT WHERE (((DBAT.T_CONT_CRIT_DT.CRIT_DT_T)="ORGC"))	Completion date
Current Completion Date	No	SiteManager	SELECT DBAT.T_CONT_CRIT_DT.CONT_ID, DBAT.T_CONT_CRIT_DT.CRIT_DT_T, DBAT.T_CONT_CRIT_DT.ACTL_DT FROM DBAT.T_CONT_CRIT_DT WHERE (((DBAT.T_CONT_CRIT_DT.CRIT_DT_T)="ADJC"))	Current completion date
Accepted with Exceptions	Yes	P2S	ContractDetail.AcceptedWithExceptions	Date the contract was accepted with exceptions.
Final Acceptance	Yes	P2S	ContractDetail.FinalAcceptance	Date the contract was accepted.
Certification Received	Yes	P2S	ContractDetail.CertificationReceived	Date certification was received.
Final Package Received	Yes	P2S	ContractDetail.FinalPackageReceived	Date the final package was received.
Final Estimate Signed	No	SiteManager	SELECT DBAT_T_CONT.CONT_ID, DBAT_T_CONT_KEY_DT.KEY_DT_T, DBAT_T_CONT_KEY_DT.ACTL_DT FROM DBAT_T_CONT INNER JOIN DBAT_T_CONT_KEY_DT ON DBAT_T_CONT.CONT_ID = DBAT_T_CONT_KEY_DT.CONT_ID WHERE (((DBAT_T_CONT_KEY_DT.KEY_DT_T)="57FI"))	Date final estimate is signed

Table 14 - Contract Status Tab Data Source and Column Recognition

Contract Amounts				
Field	**Editable**	**Source Database**	**Column Definition**	**Description**
Percent Complete	No	Site Manager	(Amount Paid/Current Contract Amount) * 100%	Percentage of contract completed by amount paid.
Original Contract Amount	No	Site Manager	DBAT.T_CONT.TOT_BID_AMT	Original contract amount.

Total Change Order	No	Site Manager	SELECT DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T, Sum(DBAT_T_CONT_CO.C_O_AMT) AS TOTAL FROM DBAT_T_CONT_CO GROUP BY DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T HAVING (((DBAT_T_CONT_CO.C_O_T)="SA")) **+** SELECT DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T, Sum(DBAT_T_CONT_CO.C_O_AMT) AS TOTAL FROM DBAT_T_CONT_CO GROUP BY DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T HAVING (((DBAT_T_CONT_CO.C_O_T)="CMR")) **+** SELECT DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T, Sum(DBAT_T_CONT_CO.C_O_AMT) AS TOTAL FROM DBAT_T_CONT_CO GROUP BY DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T HAVING (((DBAT_T_CONT_CO.C_O_T)="EXT"))	This is the sum of any SA's, CMR's and extension letters. It is also the "Grand Total Change Order" on the Change Orders tab.
Total of Extension Letters	No	SiteManager	SELECT DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T, Sum(DBAT_T_CONT_CO.C_O_AMT) AS TOTAL FROM DBAT_T_CONT_CO GROUP BY DBAT_T_CONT_CO.CONT_ID, DBAT_T_CONT_CO.C_O_T HAVING (((DBAT_T_CONT_CO.C_O_T)="EXT"))	Total of extension letters.
Revised Contract Amount	No	Site Manager	Original Contract Amount + Total Change Order	A calculated field that sums SA total, CMR total, Extension Letters total, and Original Contract Amount.
Final Contract Amount	No	Site Manager	SELECT DBAT_T_CONT.CONT_ID, Sum(DBAT_T_CONT_EST.CUR_AMT_PD) AS SumOfCUR_AMT_PD FROM DBAT_T_CONT_EST INNER JOIN DBAT_T_CONT ON DBAT_T_CONT_EST.CONT_ID = DBAT_T_CONT.CONT_ID GROUP BY DBAT_T_CONT.CONT_ID	The final contract amount. This field will be empty until the contract has been completed.
Federal Participation Percent	No	P2S	ProjectFunding.FederalSplit	The percent of federal funding .

Table 15 - Contract Amounts Data Source and Column Recognition

2.5.1.5 *Locations*

The Locations tab lists details about all routes, bridges and railroad crossings for all projects in the contract. The following mockup shows this tab with example data:

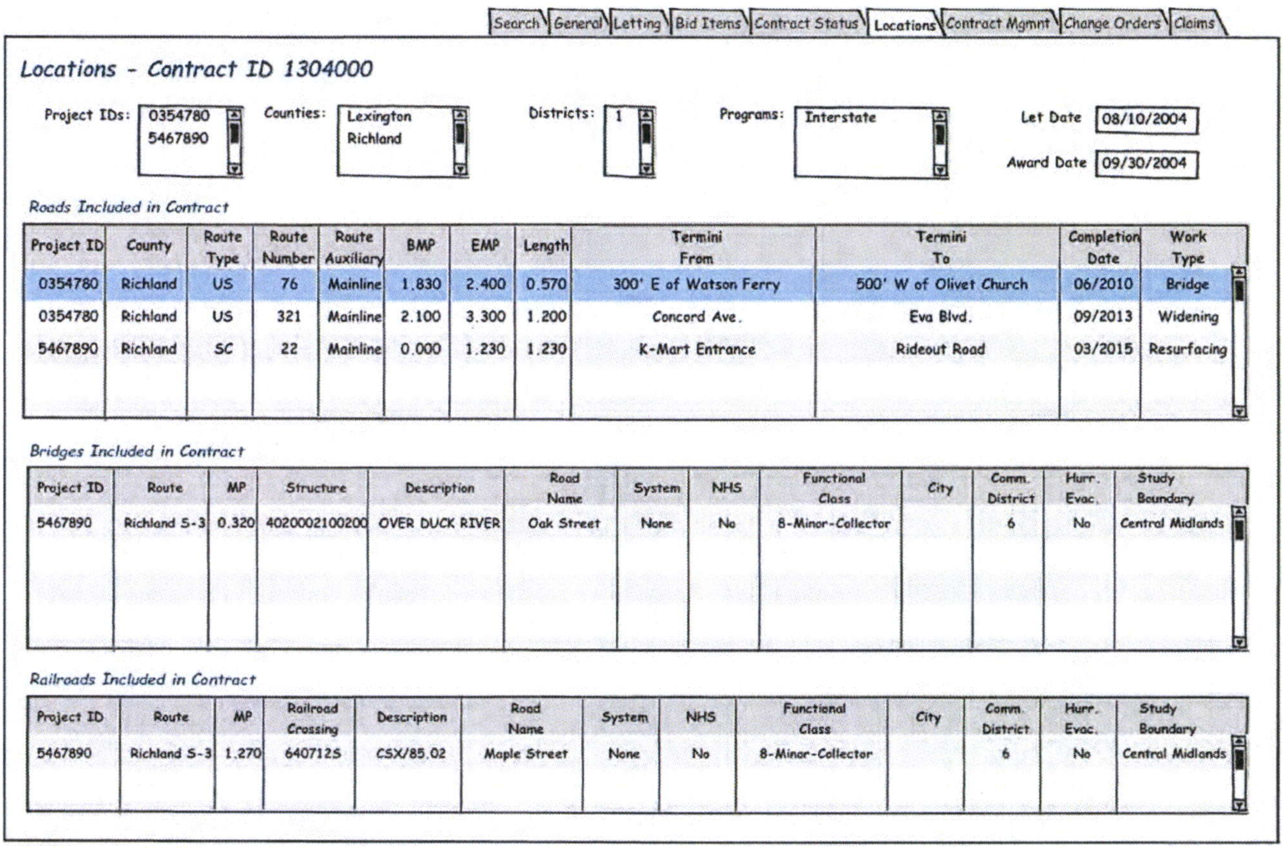


Figure 61 - Locations Tab

The information on this tab is retrieved from the P2S database and is read-only.

2.5.1.6 *Contract Management*

The Contract Management tab shows information about the Resident Construction and Resident Maintenance Engineers for the contract. The following mockup shows this tab with example data:

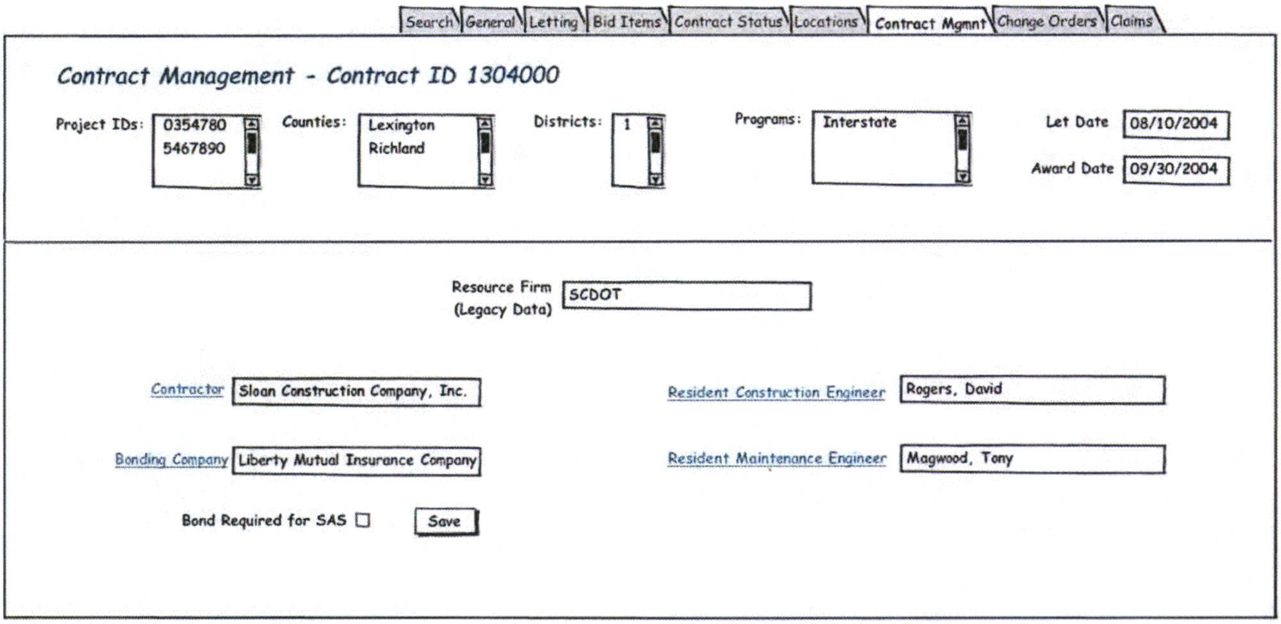


Figure 62 - Contract Management Tab

The following table lists the data source for each field on the Contract Management tab:

Field	Source Database	Column Definition	Description
Resource Firm	SiteManager	ContractDetail.ResourceFirm	This is historical data, used for reference purposes only. The list includes CRM East, CRM West, and SCDOT.
Contractor	SiteManager	SELECT DBAT.T_CONT.CONT_ID, DBAT.T_VEND.VEND_FULL_NM FROM DBAT.T_CONT INNER JOIN DBAT.T_VEND ON DBAT.T_CONT.VEND_ID = DBAT.T_VEND.VEND_ID	Name of the contractor.
Bonding Company	SiteManager	SELECT DBAT.T_VEND.VEND_FULL_NM FROM ((DBAT.T_CONT INNER JOIN DBAT.T_VEND_ASSOC ON DBAT.T_CONT.CONT_ID = DBAT.T_VEND_ASSOC.CONT_ID) INNER JOIN DBAT.T_VEND ON DBAT.T_VEND_ASSOC.ASSOC_VEND_ID = DBAT.T_VEND.VEND_ID) INNER JOIN DBAT.T_ADDR ON DBAT.T_VEND.VEND_ID = DBAT.T_ADDR.ADDR_ID	Name of the bonding company.

Field	Source Database	Column Definition	Description
Bond Required for SAS	P2S	ContractDetail. ContractBondSAS	This box will be checked if the contract requires a bond for a Set Aside Job (SAS). A Contract Superuser may edit this field.
Resident Construction Engineer	SiteManager	SELECT DBAT.T_CONT.CONT_ID, DBAT.PC_USER_DEF.USER_NM, DBAT.T_CONT.PE_UID FROM DBAT.T_CONT INNER JOIN DBAT.PC_USER_DEF ON DBAT.T_CONT.PE_UID = DBAT.PC_USER_DEF.USER_ID	Full name of the Resident Construction Engineer on the contract.
Resident Maintenance Engineer	SiteManager	SELECT DBAT.T_CONT.CONT_ID, DBAT.PC_USER_DEF.USER_NM, DBAT.T_CONT.PM_UID FROM DBAT.T_CONT INNER JOIN DBAT.PC_USER_DEF ON DBAT.T_CONT.PM_UID = DBAT.PC_USER_DEF.USER_ID	Full name of the Resident Maintenance Engineer on the contract.

Table 16 - Contract Management Tab Data Source

2.5.1.6.1 Contact Information

The labels for each of the names on the Contract Management tab are hyperlinks to obtain detail contact information. When selected, a popup window will appear with the contact information for the selected link. Below are example mockups for each and a table listing the fields displayed within the popup.

2.5.1.6.1.1 Contractor

The mockup for the Contractor interface is below:

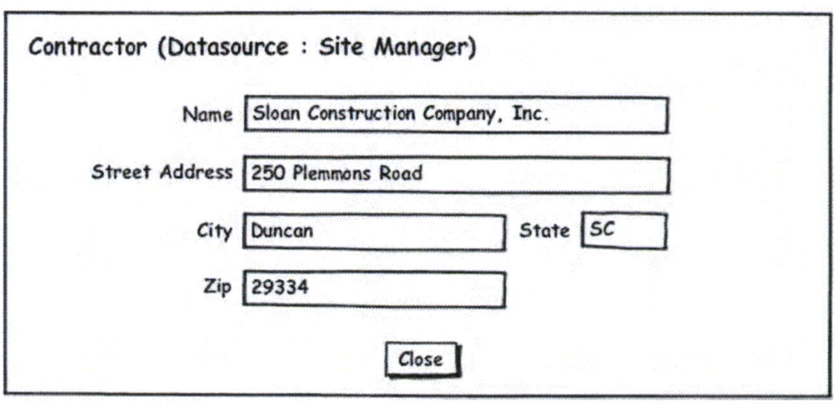


Figure 63 - Contractor

The fields on this form are:

Contractor			
Field	**Source Database**	**Column Definition**	**Description**
Contractor	SiteManager	SELECT DBAT.T_CONT.CONT_ID, DBAT.T_VEND.VEND_FULL_NM FROM DBAT.T_CONT INNER JOIN DBAT.T_VEND ON DBAT.T_CONT.VEND_ID = DBAT.T_VEND.VEND_ID	Name of contractor.
Street Address	SiteManager	SELECT DBAT.T_ADDR.ADDR_LN1 FROM DBAT.T_CONT INNER JOIN DBAT.T_ADDR ON (DBAT.T_CONT.ADDR_ID = DBAT.T_ADDR.ADDR_ID) AND (DBAT.T_CONT.ADDR_T = DBAT.T_ADDR.ADDR_T))	Address of contractor.
City	SiteManager	SELECT DBAT.T_ADDR.CITY_NM FROM DBAT.T_CONT INNER JOIN DBAT.T_ADDR ON (DBAT.T_CONT.ADDR_ID = DBAT.T_ADDR.ADDR_ID) AND (DBAT.T_CONT.ADDR_T = DBAT.T_ADDR.ADDR_T))	City of contractor.
State	SiteManager	SELECT DBAT.T_ADDR.ST_PRVCE FROM DBAT.T_CONT INNER JOIN DBAT.T_ADDR ON (DBAT.T_CONT.ADDR_ID = DBAT.T_ADDR.ADDR_ID) AND (DBAT.T_CONT.ADDR_T = DBAT.T_ADDR.ADDR_T))	State of contractor.
Zip Code	SiteManager	SELECT DBAT.T_ADDR.POSTAL_CD FROM DBAT.T_CONT INNER JOIN DBAT.T_ADDR ON (DBAT.T_CONT.ADDR_ID = DBAT.T_ADDR.ADDR_ID) AND (DBAT.T_CONT.ADDR_T = DBAT.T_ADDR.ADDR_T))	Zip code of contractor.

Table 17 - Contractor Form Fields

2.5.1.6.1.2 Bonding Company

The mockup for the Bonding Company interface is below:

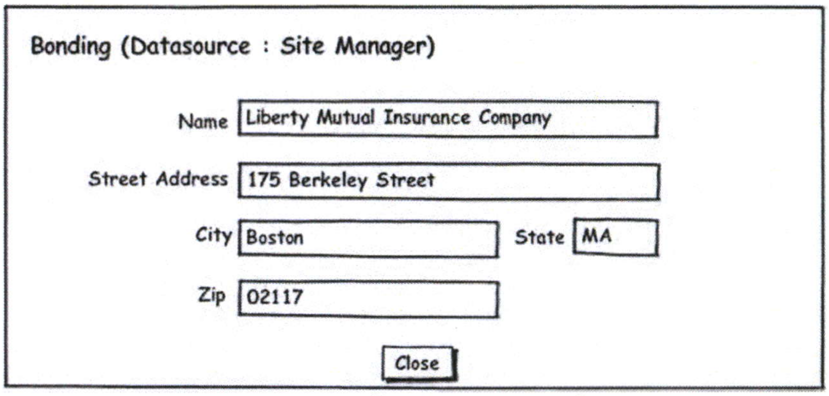


Figure 64 - Bonding Company Interface

The fields on this form are:

Bonding Company			
Field	**Source Database**	**Column Definition**	**Description**
Bonding Company	SiteManager	SELECT DBAT.T_VEND.VEND_FULL_NM FROM ((DBAT.T_CONT INNER JOIN DBAT.T_VEND_ASSOC ON DBAT.T_CONT.CONT_ID = DBAT.T_VEND_ASSOC.CONT_ID) INNER JOIN DBAT.T_VEND ON DBAT.T_VEND_ASSOC.ASSOC_VEND_ID = DBAT.T_VEND.VEND_ID) INNER JOIN DBAT.T_ADDR ON DBAT.T_VEND.VEND_ID = DBAT.T_ADDR.ADDR_ID	Name of bonding company.
Address 1	SiteManager	SELECT DBAT.T_ADDR.ADDR_LN1 FROM ((DBAT.T_CONT INNER JOIN DBAT.T_VEND_ASSOC ON DBAT.T_CONT.CONT_ID = DBAT.T_VEND_ASSOC.CONT_ID) INNER JOIN DBAT.T_VEND ON DBAT.T_VEND_ASSOC.ASSOC_VEND_ID = DBAT.T_VEND.VEND_ID) INNER JOIN DBAT.T_ADDR ON DBAT.T_VEND.VEND_ID = DBAT.T_ADDR.ADDR_ID	First address line of bonding company.
Address 2	SiteManager	SELECT DBAT.T_ADDR.ADDR_LN2 FROM ((DBAT.T_CONT INNER JOIN DBAT.T_VEND_ASSOC ON DBAT.T_CONT.CONT_ID = DBAT.T_VEND_ASSOC.CONT_ID) INNER JOIN DBAT.T_VEND ON DBAT.T_VEND_ASSOC.ASSOC_VEND_ID = DBAT.T_VEND.VEND_ID) INNER JOIN DBAT.T_ADDR ON DBAT.T_VEND.VEND_ID = DBAT.T_ADDR.ADDR_ID	Second address line of bonding company.

City	SiteManager	SELECT DBAT.T_ADDR.CITY_NM FROM ((DBAT.T_CONT INNER JOIN DBAT.T_VEND_ASSOC ON DBAT.T_CONT.CONT_ID = DBAT.T_VEND_ASSOC.CONT_ID) INNER JOIN DBAT.T_VEND ON DBAT.T_VEND_ASSOC.ASSOC_VEND_ID = DBAT.T_VEND.VEND_ID) INNER JOIN DBAT.T_ADDR ON DBAT.T_VEND.VEND_ID = DBAT.T_ADDR.ADDR_ID	City of bonding company.
State	SiteManager	SELECT DBAT.T_ADDR.ST_PRVCE FROM ((DBAT.T_CONT INNER JOIN DBAT.T_VEND_ASSOC ON DBAT.T_CONT.CONT_ID = DBAT.T_VEND_ASSOC.CONT_ID) INNER JOIN DBAT.T_VEND ON DBAT.T_VEND_ASSOC.ASSOC_VEND_ID = DBAT.T_VEND.VEND_ID) INNER JOIN DBAT.T_ADDR ON DBAT.T_VEND.VEND_ID = DBAT.T_ADDR.ADDR_ID	State of bonding company.
Zip Code	SiteManager	SELECT DBAT.T_ADDR.POSTAL_CD FROM ((DBAT.T_CONT INNER JOIN DBAT.T_VEND_ASSOC ON DBAT.T_CONT.CONT_ID = DBAT.T_VEND_ASSOC.CONT_ID) INNER JOIN DBAT.T_VEND ON DBAT.T_VEND_ASSOC.ASSOC_VEND_ID = DBAT.T_VEND.VEND_ID) INNER JOIN DBAT.T_ADDR ON DBAT.T_VEND.VEND_ID = DBAT.T_ADDR.ADDR_ID	Zip code of bonding company.

Table 18 - Bonding Company Form Fields

2.5.1.6.1.3 Resident Construction Engineer

The mockup for the Resident Construction Engineer interface is below:

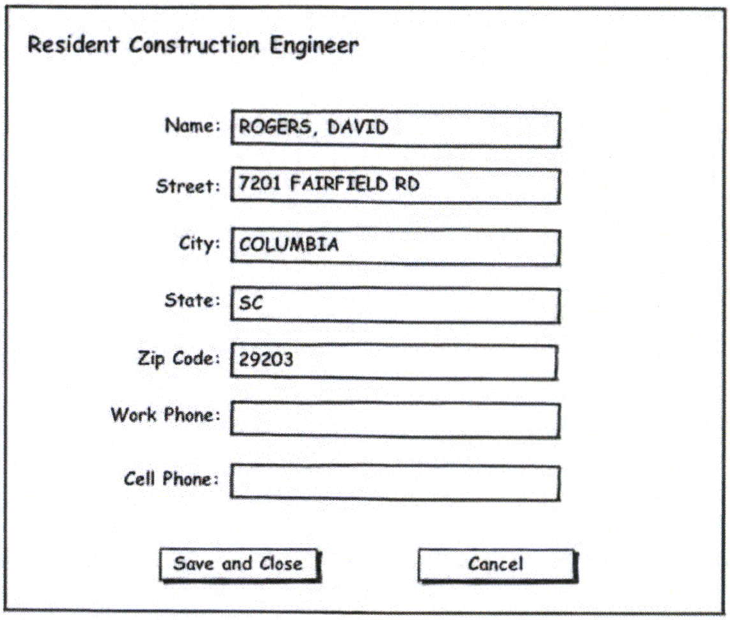


Figure 65 - Resident Construction Engineer Interface

The Resident Construction Engineer's name is retrieved from the SiteManager database. However, the address and phone number information resides in the P2S database. For this reason, users with Contract Superuser permission may edit the address and phone number data.

Save and Close – Changes will be saved to the P2S database and the interface will be closed.

Cancel– Changes will not be saved to the P2S database and the interface will be closed.

The fields on this form are:

Resident Construction Engineer				
Field	**Editable**	**Source Database**	**Column Definition**	**Description**
Resident Construction Engineer	No	SiteManager	SELECT DBAT.T_CONT.CONT_ID, DBAT.PC_USER_DEF.USER_NM, DBAT.T_CONT.PE_UID FROM DBAT.T_CONT INNER JOIN DBAT.PC_USER_DEF ON DBAT.T_CONT.PE_UID = DBAT.PC_USER_DEF.USER_ID	Name of RCE.
Street	Yes	P2S	ContractResidentConstEngineer.Street	Street address of the engineer.
City	Yes	P2S	ContractResidentConstEngineer.City	City of the engineer.
State	Yes	P2S	ContractResidentConstEngineer.State	State of the engineer.
Zip Code	Yes	P2S	ContractResidentConstEngineer.Zip	Zip code of the engineer.

Work Phone	Yes	P2S	ContractResidentConstEngineer.WorkPhone	Work phone number of engineer.
Cell Phone	Yes	P2S	ContractResidentConstEngineer.CellPhone	Cell phone number of the engineer.

Table 19 - Resident Construction Engineer Forms

2.5.1.6.1.4 Resident Maintenance Engineer

The mockup for the Resident Maintenance Engineer interface is below:

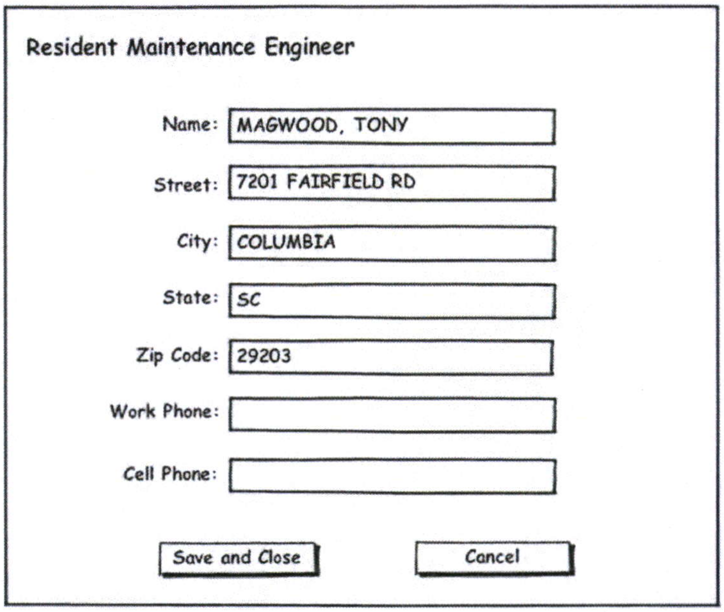


Figure 66 - Resident Maintenance Engineer Interface

The Resident Maintenance Engineer's name is retrieved from the SiteManager database. However, the address and phone number information resides in the P2S database. For this reason, users with Contract Superuser permission may edit the address and phone number data.

Save and Close – Changes will be saved to the P2S database and the interface will be closed.

Cancel– Changes will not be saved to the P2S database and the interface will be closed.

The fields on this form are:

Resident Maintenance Engineer				
Field	**Editable**	**Source Database**	**Column Definition**	**Description**
Resident Construction Engineer	No	SiteManager	SELECT DBAT.T_CONT.CONT_ID, DBAT.PC_USER_DEF.USER_NM, DBAT.T_CONT.PM_UID FROM DBAT.T_CONT INNER JOIN DBAT.PC_USER_DEF ON DBAT.T_CONT.PM_UID = DBAT.PC_USER_DEF.USER_ID	Name RME.
Street	Yes	P2S	ContractResidentMaintEngineer.Street	Street address of the engineer.
City	Yes	P2S	ContractResidentMaintEngineer.City	City of the engineer.
State	Yes	P2S	ContractResidentMaintEngineer.State	State of the engineer.
Zip Code	Yes	P2S	ContractResidentMaintEngineer.Zip	Zip code of the engineer.
Work Phone	Yes	P2S	ContractResidentMaintEngineer.WorkPhone	Work phone number of engineer.
Cell Phone	Yes	P2S	ContractResidentMaintEngineer.CellPhone	Cell phone number of the engineer.

Table 20 - Resident Maintenance Engineer Form Fields

2.5.1.7 Change Orders

The Change Orders tab shows a list of all of the change orders that have been applied to the contract. This tab replaces the "Open SA" and "Open CMR" links that were in the old card file interface. The following mockup shows this tab with example data:

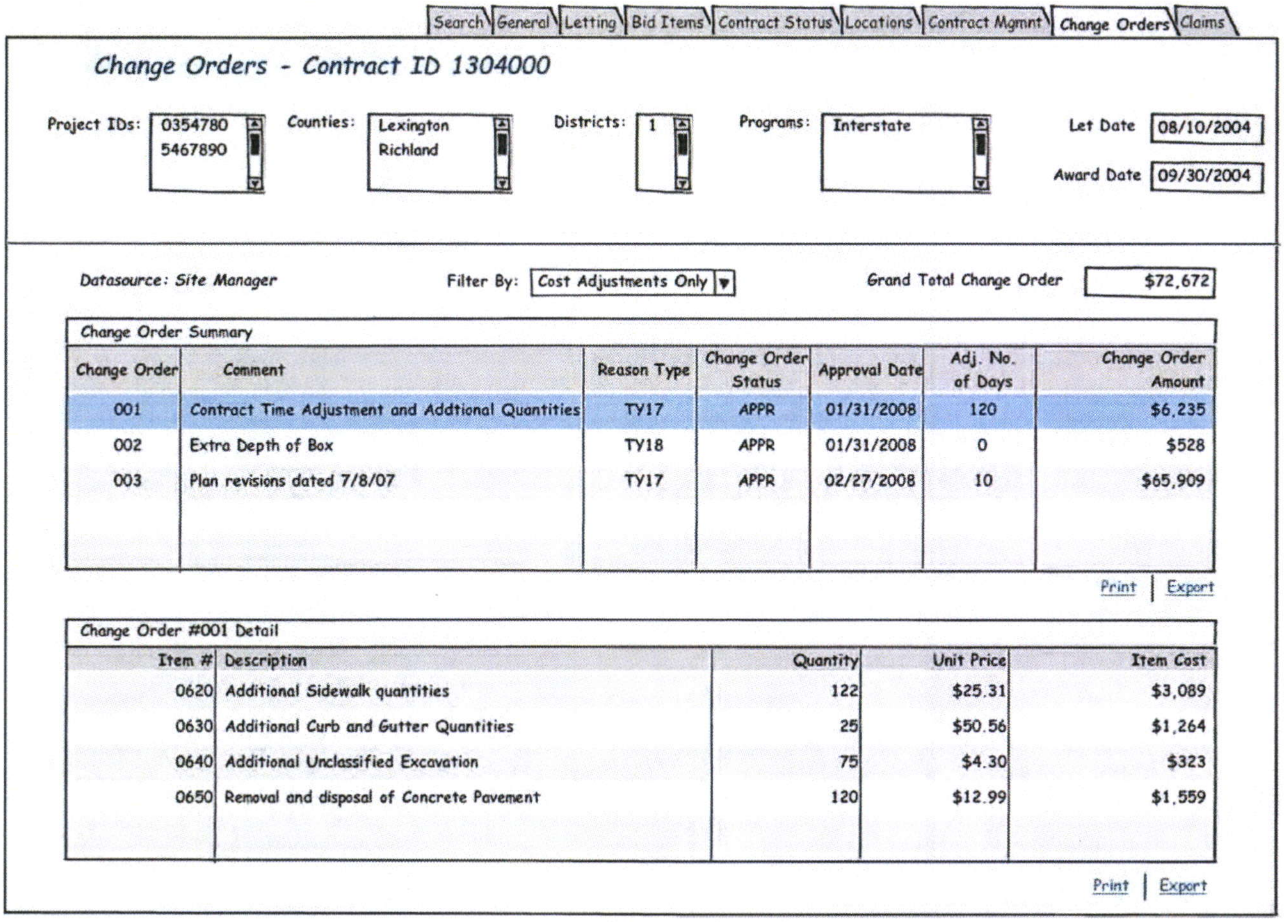


Figure 67 - Change Orders Tab

From this tab, the user is able to filter the change orders by:

- Cost Adjustments Only
- Time Adjustments Only
- Both Cost and Time Adjustments Exist
- All Change Orders

The Change Order Summary table shown in the example above has been filtered by change orders having cost adjustments.

Change Order Details

To see details such as individual line items for a change order, the user may select a summary row. The details for the selected summary row will be shown in the table below the summary information. In the example above, notice that "Change Order #001" was selected in the *summary* section so that the detail information is shown in the *detail* table below it.

The tables and textboxes on this tab contain display-only information read from SiteManager. Both the summary and the detail sections can be printed and exported by clicking the links provided.

The following lists the data source for each field on the Change Order Summary tab:

Field	Source Database	Column Definition	Description
Grand Total Change Order	SiteManager	N/A	This is the sum of the Change Order Amount column
Change Order	SiteManager	T_CONT_CO.C_O_NBR	Change Order number
Comment	SiteManager	T_CONT_CO.CHNG_DESC	Change Order description
Reason Type	SiteManager	T_CONT_CO.REAS_T	Change Order reason type.
Change Order Status	SiteManager	T_CONT_CO.C_O_STAT_T	Change Order status.
Approval Date	SiteManager	T_CONT_CO.APPR_DT	Change Order approval date.
Adj. No. of Days	SiteManager	Number of days between T_CONT_CO.APPR_DT and T_CONT_CO.LAST_MODFD_DT.	Number of days added since last date modified.
Change Order Amount	SiteManager	T_CONT_CO.C_O_AMT	Change Order amount.

Table 21 - Change Order Summary Tab Field Data Source

Change Order Detail			
Item #	SiteManager	T_CONT_CO_ITM. LN_ITM_NBR	Line item number
Description	SiteManager	T_CONT_CO_ITM.ADDNL_DESC	
Quantity	SiteManager	T_CONT_CO_ITM.C_O_ITM_QTY	Number of units
Unit Price	SiteManager	T_CONT_CO_ITM.UNT_PRIC	Price per unit
Item Cost	SiteManager	N/A	This is derived by multiplying the Quantity column by the Unit Price column

Table 22 - Change Order Detail Data Source

2.5.1.8 Claims

The Claims tab will provide the ability to view information pertaining to contract claims. This tab will also be editable by users with Contract Superuser access. All other users will not be able to edit the contents or see the buttons supporting these options.

The following mockup shows the fields that will be available on the Claims tab:

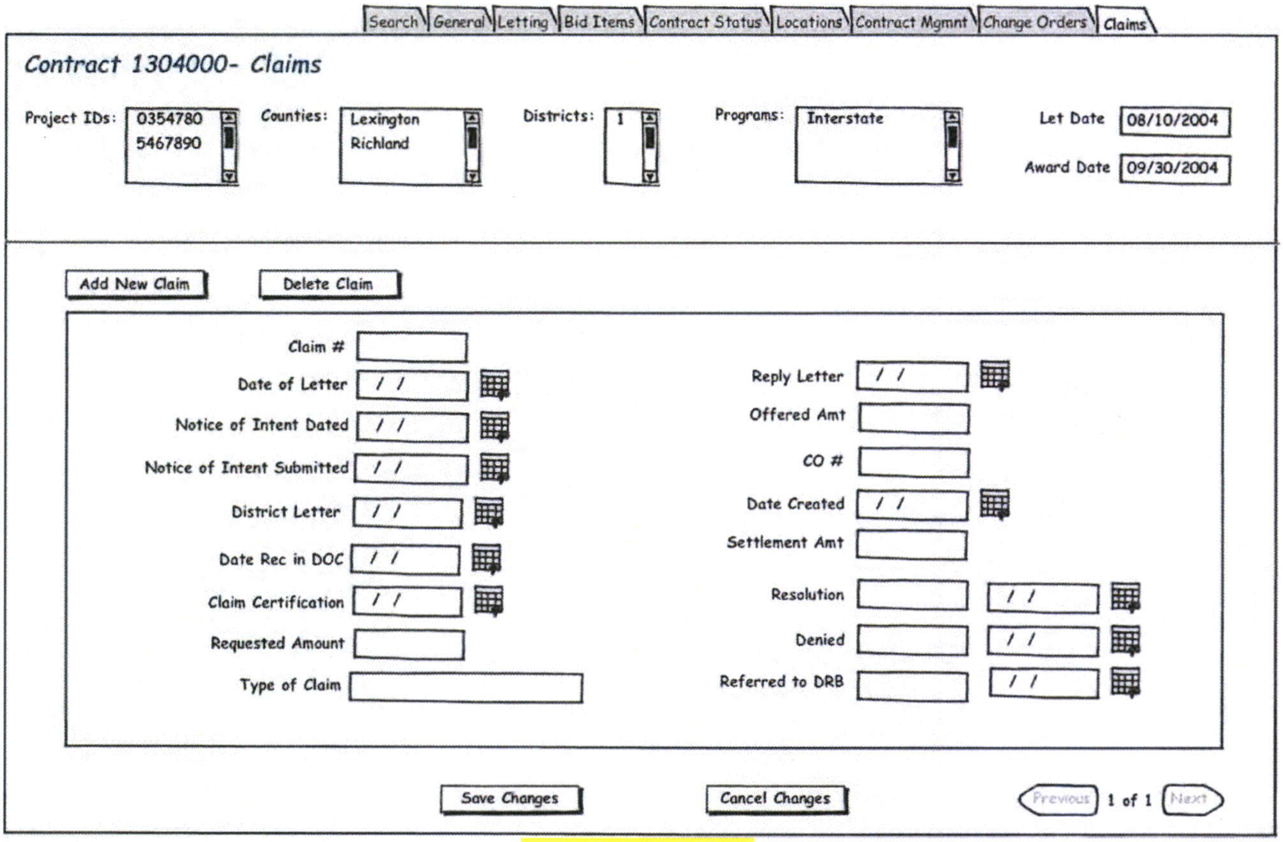


Figure 68 - Claims Tab

All of the information on this screen will be retrieved from the P2S database. If there is more than one claim on the contract, the user will be able to scroll through them using the navigation arrows at the bottom of the screen.

The available functions on the Claims tab include:

Previous – This button will display the information for the previous claim. It will only be enabled if there is more than one claim and the user has moved past the first claim in the list.

Next – This button will display the information for the next claim. It will only be enabled if there is more than one claim and the user has not yet reached the last claim in the list.

For Contract Superusers, additional buttons are available as described below:

Add New Claim – When selected, a new blank claim record will be created. The user may fill in as many fields as desired and may select the **Save Changes** buttons to write the new record to the database.

Delete Claim – When selected, the currently displayed claim will be removed from the database. Prior to actual deletion, a message will display asking the user to confirm the deletion.

Save Changes –When selected, any new records or changes made will be written to the database.

Cancel Changes – Changes will not be saved and all fields that were changed will be refreshed with the previous values.

The following table lists the data source for each field on the Claims tab:

Field	Editable	Source Database	Column Definition	Description
Claim #	Yes	P2S Database	ContractClaim.ContractClaimID	System generated unique number.
Date of Letter	Yes	P2S Database	ContractClaim.DateOfLetter	This is a Date Picker field.
Notice of Intent Dated	Yes	P2S Database	ContractClaim.DateOfNOI	This is Date Picker field.
Notice of Intent Submitted	Yes	P2S Database	ContractClaim.DateOfNOISubmit	This is a Date Picker field.
District Letter	Yes	P2S Database	ContractClaim.DateOfDistrictLetter.	This is a Date Picker field.
Date Rec in DOC	Yes	P2S Database	ContractClaim.DateRecInDOC	Date received in the Director of Construction office. This is a Date Picker field.
Claim Certification	Yes	P2S Database	ContractClaim.DateClaimCertified	This is a Date Picker field.
Requested Amount	Yes	P2S Database	ContractClaim.RequestedAmount	This is a decimal entry field.
Type of Claim	Yes		ContractClaim.LUTypeOfClaimID	This is a pick-list.
Reply Letter	Yes	P2S Database	ContractClaim.DateOfReplyLetter	This is a Date Picker field.
Offered Amt	Yes	P2S Database	ContractClaim.OfferedAmount	This is a decimal entry field.
CO #	Yes	P2S Database	ContractClaim.ChangeOrderNo	Change Order Number. This is a Text box field.
Date Created	Yes	P2S Database	ContractClaim.DateCreatedOn	This is a system generated field set to the date the claim was entered.
Settlement Amt	Yes	P2S Database	ContractClaim.SettlementAmount	This is a decimal entry field.
Resolution	Yes	P2S Database	ContractClaim.Resolution (text) ContractClaim.DateResolved (date picker)	Explanation (Text Box) and Date (Date Picker) of claim resolution.
Denied	Yes	P2S Database	ContractClaim.DeniedReason (text) ContractClaim.DateDenied (date picker)	Explanation (Text Box) and Date (Date Picker) of claim denial.
Referred to DRB	Yes	P2S Database	ContractClaim.ReferredToDRB (text)	Explanation (Text Box) and Date (Date Picker)

Field	Editable	Source Database	Column Definition	Description
			ContractClaim.DateReferredToDRB (date picker)	of referral to the Dispute Review Board.

Table 23 - Claims Tab Field Data Source

2.6 Reports

2.6.1 Standard Reports

P2S will provide the ability to create several pre-formatted standard reports. Standard reports are different from advanced (ad-hoc) reports in that standard reports are created with a pre-defined format and have the benefit of optionally having calculated fields and totals. Most standard reports are also displayed as PDF files whereas advanced reports are displayed in the HTML format since formatting is unknown. Each standard report will have a query front-end to allow the user to narrow the results. The standard reports to be provided are the following:

- Project Location Conflict Report
- Contract Status Report
- Maintenance Routes Report
- Obligations Value Report
- Tentative Let List Report
- Letting List Report
- Project Financial Report
- Obligations Management PR2 Report
- Planned Projects Report
- Programmed Projects Report

The user will access the list of standard reports by selecting "Standard Reports" from the Reports menu, as shown in the figure below:

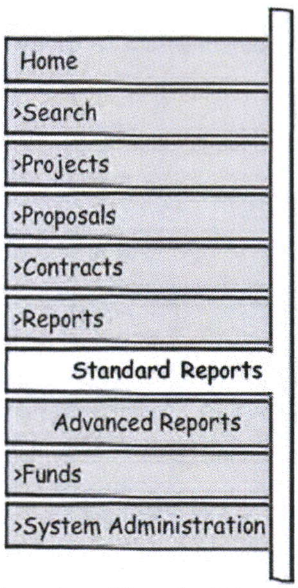


Figure 69 - Location of Standard Reports Interface

When "Standard Reports" is selected from the Reports menu, the window to the right will display an interface listing each standard report for the user to choose from. Once a report is selected, a criteria interface at the bottom of the window will reflect the criteria filter fields applicable to that report. The following mockup shows the Select Report list box on the Standard Reports window:

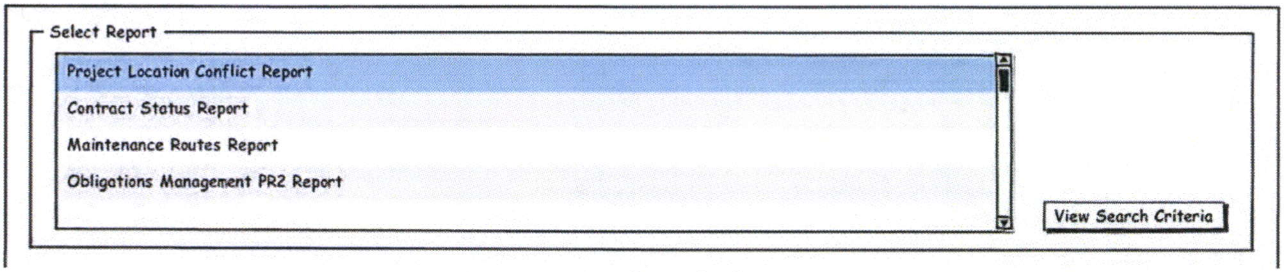


Figure 70 - List of Standard Reports

After the user selects a report, the **View Search Criteria** button will be enabled. The user may press this button to display search query fields in the area below the list. Each report will have its own custom search criteria, enabling the user to filter the results of the report. See the sections below for more information about the reports, and a description of each report's search filter fields.

2.6.1.1 Project Location Conflict Report

P2S will provide the ability to detect conflicting projects due to location, and to display the results in a report and/or map. This ability will be provided "on-demand" as it will be conducted at the request of a user. The ability to enter criteria to narrow the project list for conflict detection will be made available. Projects are in conflict when any portions of their defining milepoints overlap on the same route within the same county. Direction will be taken into account for routes that are divided highways. Options will exist to compare:

- All Planned projects
- All Programmed projects
- All projects in the system

The user may run the Project Location Conflict Report at any time by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that assists the user in selecting the projects to include in the conflict report. The following mockup shows the search interface for the on-demand Project Location Conflict Report after some filter criteria have been entered:

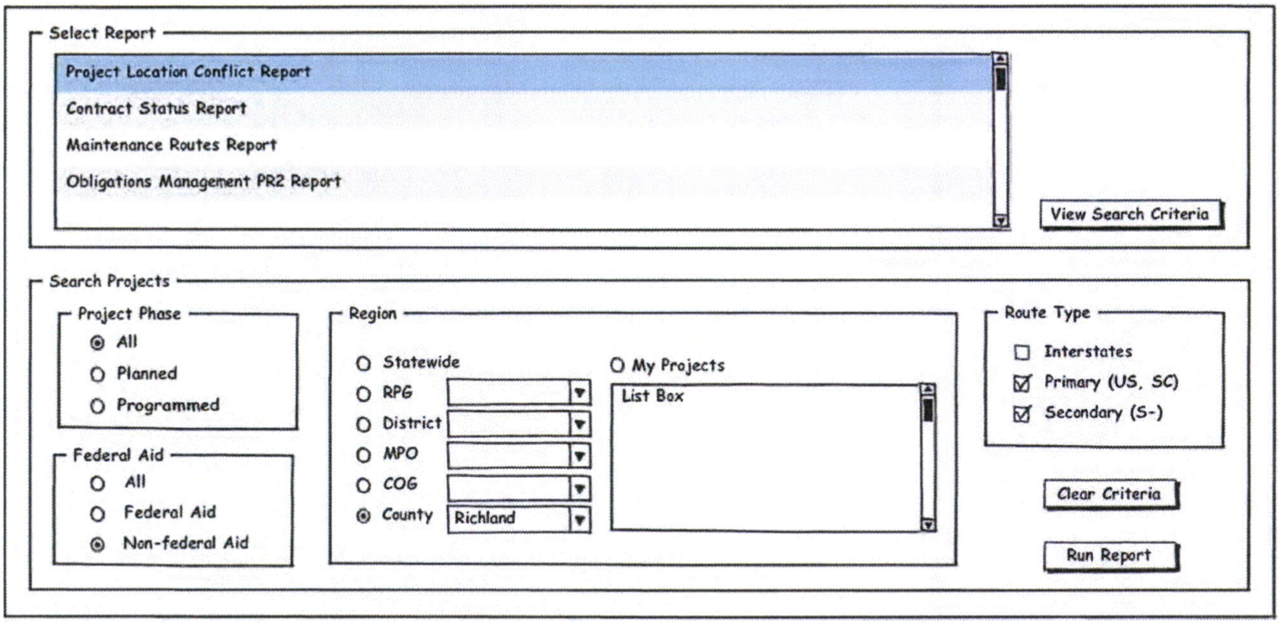


Figure 71 - On-Demand Project Location Conflict Search

The query options are as follows:

- **Project Phase** – The user must select whether to search for all projects, only planned projects, or only programmed projects.
- **Federal Aid** – The user must select whether to search for all projects, only federal aid projects, or only non-federal aid projects.
- **Region** – The user must select one out of this group of seven radio buttons. The region categories include Statewide, Regional Production Group (RPG), District, Metropolitan Planning Organization (MPO), Council of Governments (COG), County and My Projects. If anything but Statewide is chosen, the user must also select from the associated drop-down box or list box.

The My Projects radio button will be available if the application detects that the current user is a user with the ability to plan or program projects. The list box below it will be populated with all of the projects in the user's area of responsibility. Multiple projects may be selected from the list.

- **Route Type** – The user may select one or more of the Route Type checkboxes. The available route types include Interstate, Primary (US or SC) and Secondary.

<u>**Buttons within Criteria Interface**</u>

- **Clear Criteria** – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.
- **Run Report** - After entering search criteria, the user may press the **Run Conflict Report** button to generate a PDF report that includes all projects returned by the search. The following mockup shows the resulting report based on the search criteria entered:

South Carolina Department of Transportation
PROJECT LOCATION CONFLICT REPORT
05/06/2011

Project 0691251 - US 76 EB Bridge over Mill Creek

Location	BMP	EMP	Project ID	Project Description	Responsible Party	Phase
Richland US-76	**5.380**	**14.260**				
US-76	6.080	10.400	5467890	Participation Agreement with City of Columbia for Streetscaping	Ladd Gibson	Programmed
US-76	0.000	8.692	0354780	Widening US 76 to 3 lanes along the corridor	Ladd Gibson	Planned
US-76	12.000	18.061	1997342	Lighting Project in West Columbia	Julie Barker	Planned

Project 1492002 - Broad River Bridge (US 176)

Location	BMP	EMP	Project ID	Project Description	Responsible Party	Phase
Richland US- 176	**17.000**	**21.450**				
US-176	16.210	19.700	0577024	Intersection Improvement	Ladd Gibson	Programmed

Map Projects

Figure 72 - Project Location Conflict Report

Each conflicting project returned from the search results will be listed on the report in a section header. Under each project header will be a listing of the routes for this project that overlap with routes in any other project. The user may click on any hyperlinked project ID number in the table to bring up that project's Summary Report in another window. The user may also press the Map Projects link to see all the conflicting projects together on a map. See section 2.1 for more information about the map display.

2.6.1.2 Contract Status Report

The Contract Status Report displays details about the current state of a selected contract. A large amount of facts and figures pertaining to the contract are shown on the page in a printer-friendly format. Information listed on the report includes the location of the contract, a breakdown of the projects included in the contract, and the vendor, dates and dollar amounts associated with the contract.

The user may run the Contract Status Report by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that assists the user in selecting the contracts to include in the status report. The following mockup shows the search interface for the Contract Status Report after some filter criteria have been applied:

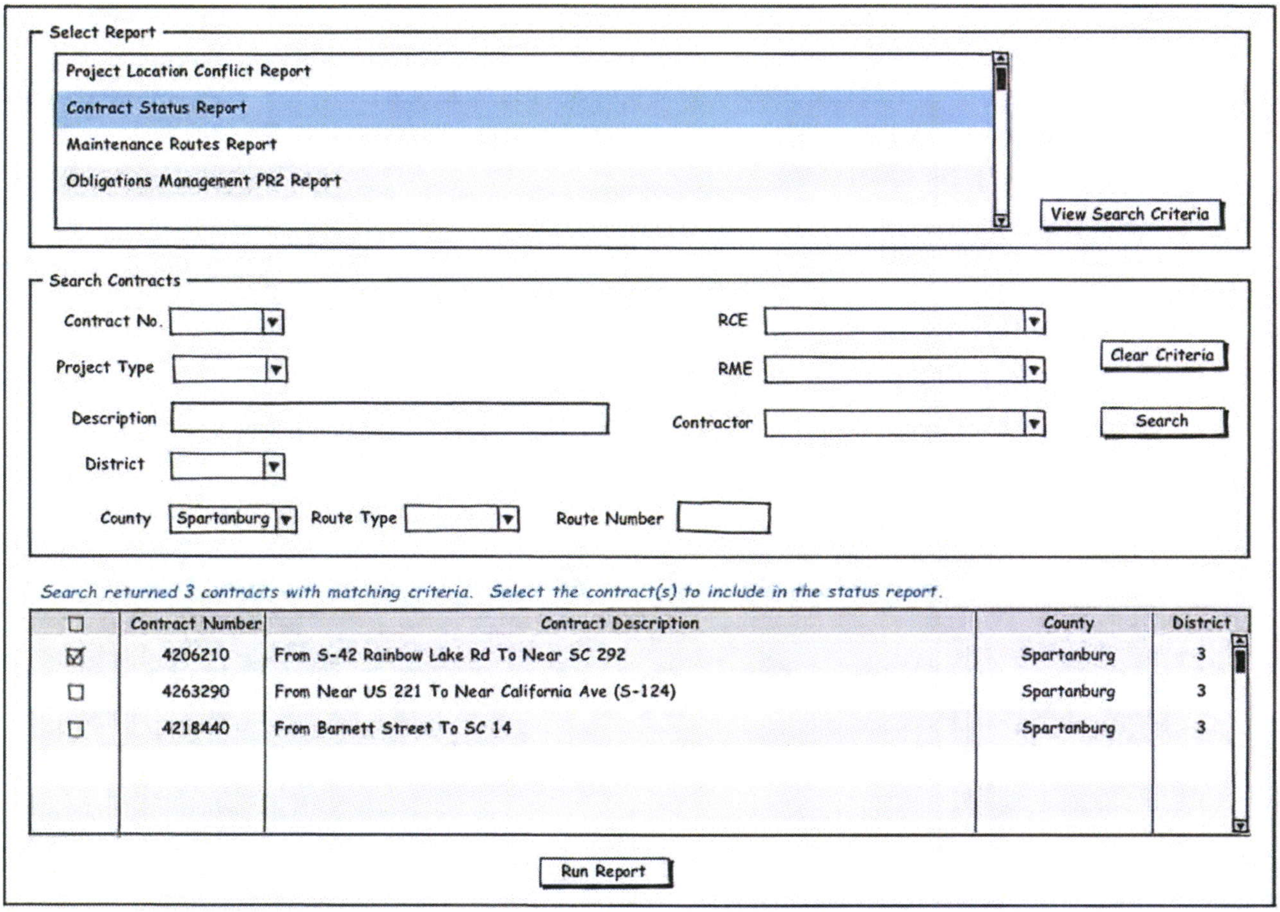


Figure 73 - Contract Status Report Search

The user may fill in as many of the search fields as desired. The query options are as follows:

- **Contract No.** – This drop-down box is a list of all of the contract ID numbers in the system.
- **Project Type** – This drop-down box is a list of project types that will be retrieved from the SiteManager database.
- **Description** – This text box allows the user to type in a contract description.
- **District** – This drop down box is a list of Districts 1-7.
- **County** – This drop down box is a list of counties in South Carolina.
- **Route Type** – This drop down box is a list of route types. The available route types include Interstate, Primary (US or SC) and Secondary.
- **Route Number** – This numeric entry field allows the user to type in a route number.
- **RCE** – This drop down box is a list of each Resident Construction Engineer (RCE) in the system.
- **RME** – This drop down box is a list of each Resident Maintenance Engineer (RCE) in the system.
- **Contractor** – This drop down box contains a list of all of the contractors (vendors) in the system.

The functions on this screen are as follows:

- **Clear Criteria** – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.

- **Search** – This button will display a table of search results in the lower portion of the screen. The user will have the option to select contracts from the table to include in the report.
- **Run Report** – This button will generate the Contract Status report containing the selected contracts. The report will open in a new window in the PDF format.

The following mockup shows the resulting report if the user selects the first contract in the list and presses the Run Report button:

RPT ID: RCACONST
User ID: gibsonir

South Carolina
Department of Transportation

Date: 02/25/01
Page: 1 of 1

CONTRACT STATUS REPORT
Contract ID: 4206210

Vendor ID: IMY001
Vendor Name: Myles Construction Co., Inc.
Schedule Type:

Fed State Project Number: BR-BR42(016)
Current Status: Active
Time Charges Type: Calendar Days
Retainage Pct: 0

Bid Days: 190
Adjusted Days: 40

Current Days: 230
Charged Days: 201

Remaining Days: 29
Percent Complete (Time): 87.39

Date Let: 10/11/2005
Notice to Proceed: 01/03/2006
Work Began: 01/03/2006

Open to Traffic: 00/00/0000
Work Complete: 00/00/0000
Substantial Complete: 07/22/2006

Original Completion: 07/11/2006
Current Completion: 08/08/2005

Location

County	Route	Division	District	Work Type
Spartanburg	SC-9	3	3	Bridge

Current Contract Amounts

Bid: $2,875,352.07
Approved CO: $344,518.74
Current: $3,219,870.81
Pending CO: $0.00
Anticipated: $3,219,870.81
Pos Adjustment: $24,272.49

Installed: $2,849,026.20
Over/Under: $0.00
Paid to Date: $2,864,691.01
Pending Paid: $0.00
Remaining: $370,844.61
Neg Adjustment: $0.00

Liq Damages: $0.00
Subcontract: $1,129,529.11
Total Retainage: $0.00
Payment Retainage: $0.00
Securities Retainage: $0.00
Escrow Retainage: $0.00

Current Project Breakdown

Project ID	Bid Amount	Approved CO Amount	Installed Amount	Percent Complete ($)
028414B	$1,228,506.87	$0.00	$1,234,442.12	100.48%
028414R	$1,646,845.20	$344,518.74	$1,614,584.08	81.08%

Figure 74 - Contract Status Report

The selected contract ID will be listed near the top of the report along with all of the contract details that are shown in the above example. The report will be displayed in the PDF format from which the user may save or print the report. If more than one contract is selected, a separate report page will be generated for each contract. All of the pages will be output to one PDF file.

2.6.1.3 Maintenance Routes Report

The Maintenance and Pavement Management offices support each other in providing the most up-to-date list of routes that should be considered for improvement. In the past, it was often difficult to keep this list current. However, with the development of P2S, steps have been taken to assist both the Maintenance office and the Pavement Management office in managing these routes. Specifically, the workflow supported by P2S is as follows:

- The Pavement Management office, with the help of the Maintenance office, will provide the list of routes that are up for improvement. These routes will be maintained by the Pavement Management office and will reside in the tables INT_FINAL (for Interstate routes), PRIM_FINAL (for US and SC routes) and SEC_FINAL (for secondary routes).
- Using the Maintenance Routes report provided by P2S, Maintenance users with special permission will be able to view the routes included in the above tables by district.
- From this interface, routes that have previously been included in a maintenance project will be indicated so that they may be exported to an Excel file. This file would be given to Pavement Management personnel so that the routes in the file could be removed from the applicable database table(s).
- After the tables have been updated, the Maintenance user can re-run the Maintenance Routes report and once satisfied with the routes for a district, can mark them as "Approved."
- Once routes have been "approved," they will be made available to Maintenance personnel so that they can be used to assign routes to a P2S project. This capability is provided from the *Maintenance Route Helper* from within the Road tab of P2S (see the Road Selection Helpers section for more details on the Maintenance Route Helper).

Only "Maintenance Superusers," as assigned by the P2S administrator, will have access to the Maintenance Routes report. All other users will not see this report in the list. The following mockup shows the search criteria interface once the report has been selected:

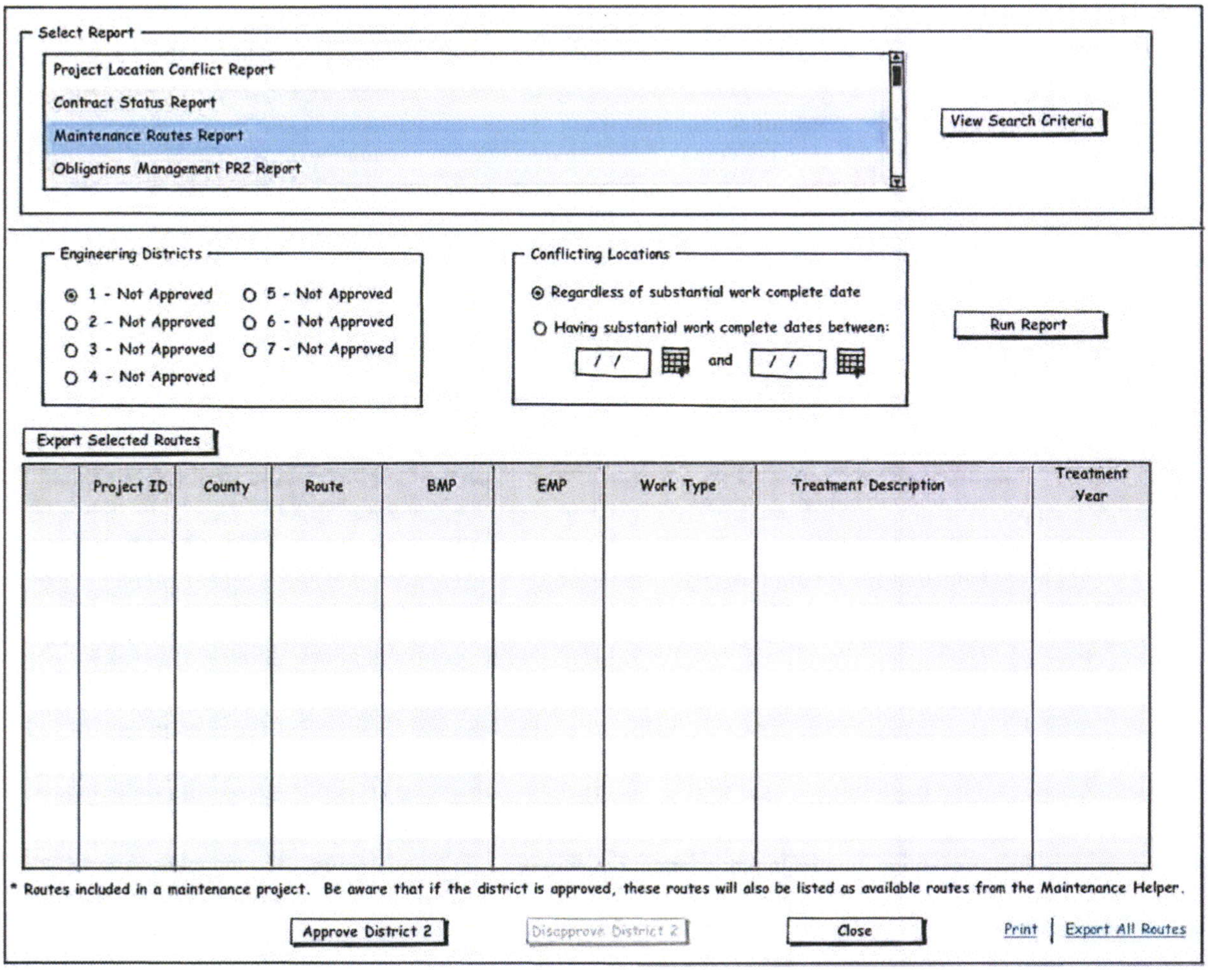


Figure 75 - Maintenance Routes Report Search Criteria

The search criteria options are as follows:

- **Engineering Districts** – Each engineering district is listed with the last approval status. The very first time this report is run, *all* districts will show the status of "Not Approved." It is up to a Maintenance Superuser to select a district radio button and one-by-one, approve each district, when feasible. The district radio button selected will indicate which district to limit the search results. For example, if the district 1 radio button is selected, the report will return *only* routes in engineering district 1 from the INT_FINAL, PRIM_FINAL and SEC_FINAL tables.
- **Conflicting Locations** – The Maintenance Routes report will always indicate if a returned route has any section of it previously included in a maintenance project (only those projects having the work type of Rehabilitation, Reconstruction or Preservation). The user can choose to narrow down how stringent the filter should be by setting a date range on the Substantial Work Complete for previous projects. This filter will default to not using a date filter so that all maintenance projects planned or programmed that overlap a route from the pavement management tables are displayed.
- **Run Report** – Once the user has selected a district and optionally entered a substantial work complete range, the Run Report button will be used to generate the report.

In the following mockup, the user has selected engineering district 1 and has chosen not to filter by the substantial work complete date:

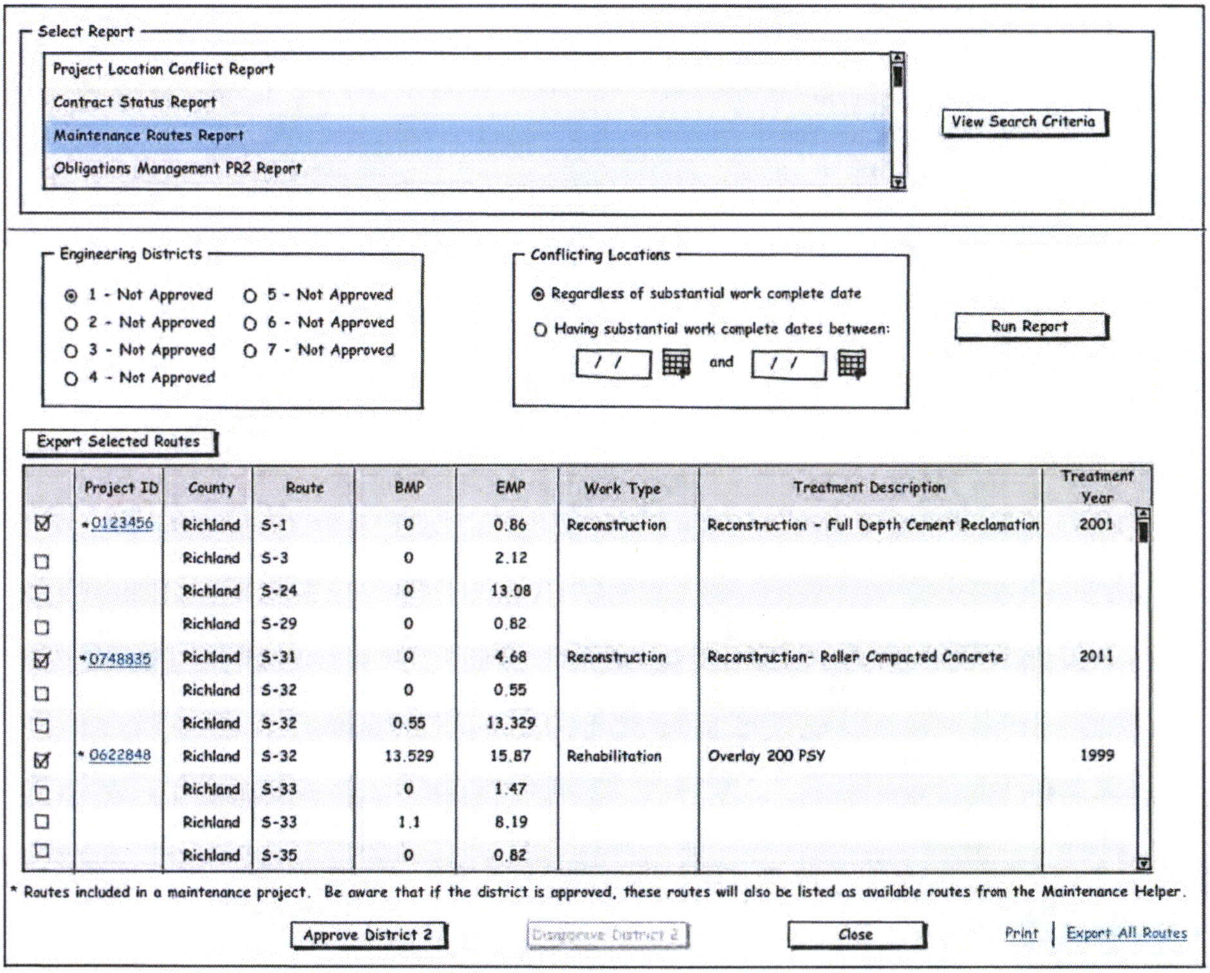


Figure 76 - Maintenance Routes Report Results

Notice that of the displayed routes, sections from 3 of them were previously included in a maintenance project as indicated by the asterisk (*).

The columns included in the report are as follows:

- **Checkboxes** – Checkboxes are provided so that the user can specify which routes to include in the export file. By default, all route sections previously included in a maintenance project will be selected. The user may choose to select or unselect a checkbox for *any* route – even those not indicated with an asterisk.
- **Project ID** – The Project ID identifies the project containing the route section. The ID is a hyperlink so that when selected, the summary report for the project is displayed in a separate window. This field is only populated when the route section was previously included in a maintenance project.
- **County** – The county of the route section.

- **Route** – The route type, route number and route auxiliary of the route section. The route auxiliary of "Mainline" is not shown, since this is the auxiliary type for the majority of routes.
- **BMP** – The beginning milepoint of the route section.
- **EMP** – The ending milepoint of the route section.
- **Work Type** – The work type of the route section. This field is only populated when the route section was previously included in a maintenance project.
- **Treatment Description** – The treatment description of the route section. This field is only populated when the route section was previously included in a maintenance project.
- **Treatment Year** – The substantial work complete date for the route section. This field is only populated when the route section was previously included in a maintenance project.

The functions available from the report include:

- **Export Selected Routes –** After reviewing all of the routes and manually selecting or unselecting applicable checkboxes, the user may choose to export the selected route sections to an Excel file. To do this, the **Export Selected Routes** button will be selected. Once downloaded, the Maintenance user can send this file to the Pavement Management office and discuss next steps.
- **Approve District** – The currently selected District number will display on this button. The button will only be enabled if the selected district is not currently approved. The user may press the button to indicate that the list of routes is now satisfactory, and is approved to be shown to Maintenance office users who plan and program projects.
- **Disapprove District** – The currently selected District number will display on this button. The button will only be enabled if the selected district is currently approved. The user may press the button to indicate that changes need to be made to the list of routes, and that it should not be viewed until it is approved.
- **Close** – This button closes the report window.
- **Print** – This link will print the report. This report is not displayed as a PDF file because of the interactive checkboxes. However, you may choose to print to a PDF queue.
- **Export All Routes** – This link will export the contents of the entire report to Excel, regardless of whether the checkbox is selected. Please note that this is different than the **Export Selected Routes** button which only exports the *selected* routes.

2.6.1.4 Obligations Value Report

The Obligations Value Report displays authorized and proposed obligation amounts for projects and proposed obligation amounts for PE, RW and CON work phases.

The Obligation Values report is comprised of four sections. These sections are:

- Obligation Value Summary - This section reports the STIP Goal, Authorized and Proposed obligation amounts for projects broken down at the Program level.
- Proposed Obligations (PE) - This section reports the proposed obligation amounts for the Preliminary Engineering work phase broken down at the Project level.
- Proposed Obligations (RW) - This section reports the proposed obligation amounts for the Right of Way work phase broken down at the Project level.
- Proposed Obligations (CON) - This section reports the proposed obligation amounts for Construction work phases broken down at the Project level.

The user may run the Obligations Value Report by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that allows the user to specify the month range for which to generate the Obligations Value Report. The following mockup shows the search interface for the Obligations Value Report:

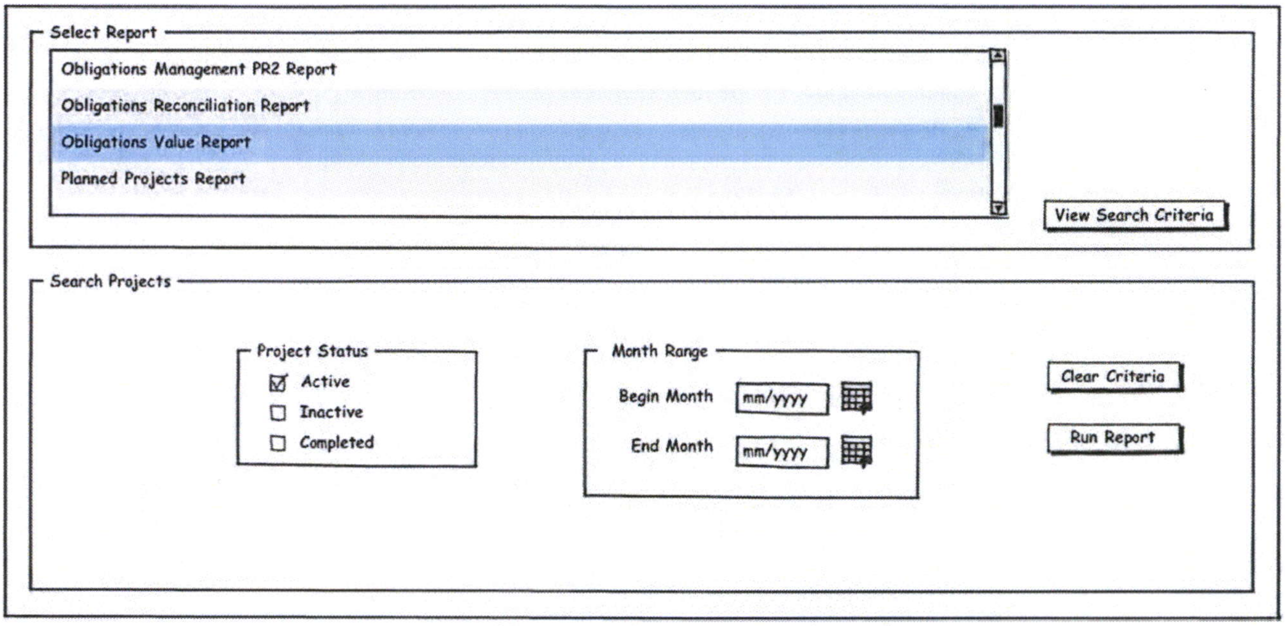


Figure 77 - Obligations Value Report Search Interface

The query options are as follows:

Project Status – The user may select one or more of the project status types. The available Project Statuses include Active, Inactive and Completed. Active is selected by default. At least one project status must be selected for a report to be generated.

Month Range – Within this group box the user is required to specify a begin month/year and an end month/year. Only projects whose proposed obligation or authorization date for a funding transaction is within this user specified range will be included in the report. The end month/year entered must be the same as the begin month/year or a month/year that occurs after the specified begin month/year.

In addition to the user specified criteria options, the system will add the following internal criteria filters when generating the report:

- The Obligation Value Summary section of the report will only include those Programs which have been denoted to be included in this report. The Programs included will be as specified by SCDOT and will be denoted in the InObligationValueRpt column of the P2S LUProgram table.
- The Proposed Obligations (PE) section of the report will only include those projects which have an associated Preliminary Engineering work phase.
- The Proposed Obligations (RW) section of the report will only include those projects which have an associated Right of Way work phase.

- The Proposed Obligations (CON) section of the report will only include those projects which have an associated Construction work phase.

Buttons within Criteria Interface

- **Clear Criteria** – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.
- **Run Report** - After entering search criteria, the user may select the **Run Report** button to generate an Obligations Value Report in PDF format that includes all projects returned by the search.

2.6.1.4.1 Obligation Value Summary Section

The following mockup is an example of the Obligation Value Summary section of the Obligation Values Report:

OBLIGATION VALUES REPORT

OBLIGATION VALUE SUMMARY

June 2011 - September 2011

Date Generated: 06/01/2011

Program Category	Program	STIP Goal	Authorized	Proposed	Obligation Value	Variance
System Upgrade		$148,000,000.00	$52,753,518.66	$72,400,122.77	$125,153,641.43	$22,846,358.57
	Rural System Upgrade	$52,000,000.00	$9,712,516.68	$8,000,001.00	$17,712,517.68	$34,287,482.32
	Urban System Upgrade	$56,000,000.00	$9,130,951.14	$64,400,121.77	$73,531,072.91	$(17,531,072.91)
	Rural System Upgrade	$40,000,000.00	$33,910,050.84	$0.00	$33,910,050.84	$6,089,949.16
Interstate		$164,000,000.00	$40,977,362.53	$206,429,731.00	$247,407,093.53	$(83,407,093.53)
	Rehabilitation	$25,000,000.00	$17,376,397.97	$64,419,000.00	$81,795,397.97	$(56,795,397.97)
	Upgrade	$100,000,000.00	$2,399,188.89	$140,160,731.00	$142,559,919.89	$(42,599,919.89)
	Operations/Traffic Eng	$19,000,000.00	$10,500,898.56	$1,850,000.00	$12,350,898.56	$6,649,101.44
	Debt Service	$20,000,000.00	$10,700,877.11	$0.00	$10,700,877.11	$9,299,122.89
Safety		$45,000,000.00	$27,128,804.13	$15,525,000.00	$42,653,804.13	$2,346,195.87
	HES	$38,000,000.00	$19,889,951.13	$15,525,000.00	$35,414,951.13	$2,585,048.87
	Safe Routes To School	$3,000,000.00	$2,713,504.36	$0.00	$2,713,504.36	$286,495.64
	RR Hazard Elimination	$4,000,000.00	$4,525,348.64	$0.00	$4,525,348.64	$(525,348.64)
CMAQ		$16,000,000.00	$7,891,125.25	$319,000.00	$8,210,125.25	$7,789,874.75
	Mandatory	$8,100,000.00	$1,494,894.78	$319,000.00	$1,813,894.78	$6,286,105.22
	Non-Mandatory	$7,900,000.00	$6,396,230.47	$0.00	$6,396,230.47	$1,503,769.53
Bridge		$125,000,000.00	$44,810,550.31	$93,823,022.00	$138,633,572.31	$(13,633,572.31)
	Bridge Replacement	$116,500,000.00	$32,193,374.04	$88,334,022.00	$120,527,396.04	$(4,027,396.04)
	Bridge Painting	$3,000,000.00	$2,312,340.00	$4,400,000.00	$6,712,340.00	$(3,712,340.00)
	Bridge Inspection	$3,000,000.00	$7,148,740.00	$1,089,000.00	$8,237,740.00	$(5,237,740.00)
	Bridge Deck Repair	$2,500,000.00	$3,156,096.27	$0.00	$3,156,096.27	$(656,096.27)
Federal Lands		$10,000,000.00	$40,066.52	$0.00	$40,066.52	$9,959,933.48
Enhancement		$17,000,000.00	7,961,344.23	$5,870,306.99	$13,831,651.22	$3,168,348.78
Planning		$15,000,000.00	$3,344,290.00	$0.00	$3,344,290.00	$11,655,710.00
Pavment & Recon st		$144,000,000.00	$131,118,326.98	$15,108,353.75	$146,226,680.73	$(2,226,680.73)
	Resurfacing	$133,000,000.00	$116,250,555.38	$12,818,353.75	$129,068,909.13	$3,931,090.87
	Guardrail Repair	$4,000,000.00	$4,7767,373.50	$0.00	$4,776,373.50	$(776,373.50)
	Signal Upgrades	$2,000,000.00	$10,091,398.10	$0.00	$10,091,398.10	$(8,091,398.10)
	Signing & Marking	$5,000,000.00	$0.00	$2,290,000.00	$2,290,000.00	$2,710,000.00
Federal Match		$140,000,000.00	$19,625,000.00	$101,909,955.34	$121,534,955.34	$26,465,044.66
SIB Payments		$56,000,000.00	$22,901,589.40	$0.000	$22,901,589.40	$33,098,410.60
Modifications & Final Closeouts		$0.00	$(12,737,367.27)	$10,185,861.78	$(2,551,505.49)	$2,551,505.49
Federal STIP Planned Obligation Total		888,000,000.00	$345,814,610.74	$521,571,353.63	$867,385,964.37	$20,614,035.63

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Figure 78 - Obligations Values Report - Obligation Value Summary

The following defines the fields reported in the Obligation Value Summary section of the Obligation Values Report:

Program Category – This is the Program Category, as defined in the LUProgramCategory database table. Only those Program Categories with at least one Program denoted to be included in this report will be displayed.

Program – This is the Program, as defined in the LUProgram database table. Only those Programs which have been denoted to be included in this report will be displayed.

STIP Goal – This is the amount of STIP money allocated for the Program.

Authorized – This is the total initial authorized obligation amount across all projects for the program type. The value included in this total for each project is determined using the following logic:

- For each Project, at the work phase funding transaction level find the transactions whose Program is set to the report row Program, whose Action is set to "Initial" and whose Authorization Date contains a value.
- From this set of transactions, find the transaction with the earliest Authorization Date.
- Add the Obligation Amount from this transaction into the value reported for the Authorized report column.
- All other authorized work phase funding transactions, regardless of the Action value, for the given program of the project will be added into the Authorized value reported on the "Modifications & Final Closeouts" report row.

Proposed – This is the total initial proposed obligation amount across all projects for the program type. Only projects which have no Initial Authorized funding are included in this column. The value included in this total for each project is determined using the following logic:

- For each Project, at the work phase funding transaction level find the transactions whose Program is set to the report row Program, whose Action is set to "Initial" and whose Authorization Date does not contain a value.
- From this set of transactions, find the transaction with the earliest Obligation Date.
- Add the Obligation Amount from this transaction into the value reported for the Proposed report column.
- All other proposed work phase funding transactions for the given program in the project will be added into the Proposed value reported on the "Modifications & Final Closeouts" report row.

Obligation Value – This is the total obligation value for the program. It is calculated as the sum of the Authorized and Proposed report columns.

Variance – This is the difference in the amount of funds allocated for the STIP Goal and the Obligation Value. This value is calculated as difference between the STIP Goal and Obligation Value columns.

A total summation line is included at the end of the report, named "Federal STIP Planned Obligation Total" which reports the total of each report column across all programs.

2.6.1.4.2 Obligation Value Summary Section

The following mockup is an example of the Proposed Obligations (PE) section of the Obligation Values Report. The Proposed Obligations (RW) and Proposed Obligations (CON) sections of the report will look identical to this mockup, with the exception of the data reported in each section:

OBLIGATION VALUES REPORT
PROPOSED OBLIGATIONS (PE)
June 2011 - September 2011

Date Generated: 06/01/2011

Project ID	Project Name	County	Route	Improvement Type	Obligation Date	Total Obligation	Federal Obligation	State Obligation	Other Obligation	Let Date
3483721	SC 9 Bridge Replacement	Marlboro	SC 9	Prel. Engr. (Consult)	06/2011	$59,000.00	$47,200.00	$11,800.00	$0.00	12/2011
3594827	Camden Truck Route Widening	Kershaw	S- 45	Prel. Engr. (Consult)	06/2011	$1,500,000.00	$1,200,000.00	$300,000.00	$0.00	
3687291	US 17 Intersection Improvement	Georgetown	US 17	Prel. Engr. (Consult)	06/2011	$700,000.00	$560,000.00	$140,000.00	$0.00	07/2013
4038491	I-85 Improvements	Charleston	I-85	Prel. Engr.	06/2011	$150,000.00	$150,000.00	$0.00	$0.00	
					JUNE OBLIGATION TOTAL	$2,409,000.00	$1,957,200.00	$451,000.00	$0.00	
3594873	SC 61 Resurface	Charleston	SC 61	Prel. Engr.	07/2011	$5,000.00	$4,000.00	$1,000.00	$0.00	
					JULY OBLIGATION TOTAL	$5,000.00	$4,000.00	$1,000.00	$0.00	
					PROPOSED OBLIGATIONS (PE)	$2,414,000.00	$1,961,200.00	$452,800.00	$0.00	

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Figure 79 - Obligation Values Report - Proposed Obligations (PE)

This report is grouped by month and sorted by the project ID within each monthly grouping. A summary record is included at the end of each month group to report amount totals for the month. A report total record is included at the end of the report to report amount totals for the entire report.

Each of the three Proposed Obligation sections of the report will contain funding data for project work phases as follows:

- Proposed Obligations (PE) – This section reports the proposed obligation amounts for the Preliminary Engineering work phase broken down at the Project level.
- Proposed Obligations (RW) – This section reports the proposed obligation amounts for the Right of Way work phase broken down at the Project level.
- Proposed Obligations (CON) – This section reports the proposed obligation amounts for Construction work phases broken down at the Project level. Multiple work phases are classified as Construction work phases and are denoted as such in the LUWorkPhase database table. Examples are Road Construction, Bridge Construction and Other Construction.

The following defines the fields reported in the three Proposed Obligations sections of the Obligation Values Report:

Project ID – This is the unique Project ID for the project.

Project Name – This is the name of the project.

The route information for each project is reported in the County and Route fields. All routes associated with a project are not listed in the report, rather only the route with the most mileage is reported. If the project is defined at the state, district or county level only with no associated routes, then this will be reflected in the County column and no value will be reported for Route.

County – This is the County of the route. If the Project is defined at the state, district or county level only with no associated routes, then this column will contain the text "Statewide," or a comma separated list of the unique district numbers or the unique county names included in the project.

Route – This is the short description of the route, using the format <Short Route Type><Route Number><Short Route Auxiliary>. Examples are "US 17," "SC 1 ALT."

Improvement Type – This is the improvement type associated with the work phase for the project.

Obligation Date – This is the earliest proposed obligation date from all funding transactions for the work phase for the project.

Total Obligation – This is the total amount of proposed obligations for the project. Based on the report, this will be either the total for the PE work phase, the RW work phase or the CON work phases.

Federal Obligation – This is the portion of the total obligation amount from federal sources.

State Obligation – This is the portion of the total obligation amount from state sources.

Other Obligation – This is the portion of the total obligation amount from other sources

Let Date – This is the proposed letting date for the project.

2.6.1.5 Tentative Let List

The Tentative Let List Report displays project and route details for all contracts with a proposed letting date within a user specified month range. This report option actually generates multiple tentative let list reports for a user specified month range. Monthly reports will be generated for each month within the user specified month range along with five category reports generated for each of the following Improvement Type categories: (1) Bridge, (2) Enhancement, (3) Operational, (4) Rehabilitation & Resurfacing and (4) Widening & Safety Improvements. Projects included in each of the five category reports will be those with a proposed letting date in the user specified month range. Projects included in each monthly report will be just those with a proposed letting date in the specific month of the report. For both report types, only projects which contain a construction work phase that has been denoted as included in the letting of the project will be included in a report.

The user may run the Tentative Let List Report by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that allows the user to specify the month range for which to generate the Tentative Let List Report. The following mockup shows the search interface for the Tentative Let List Report:

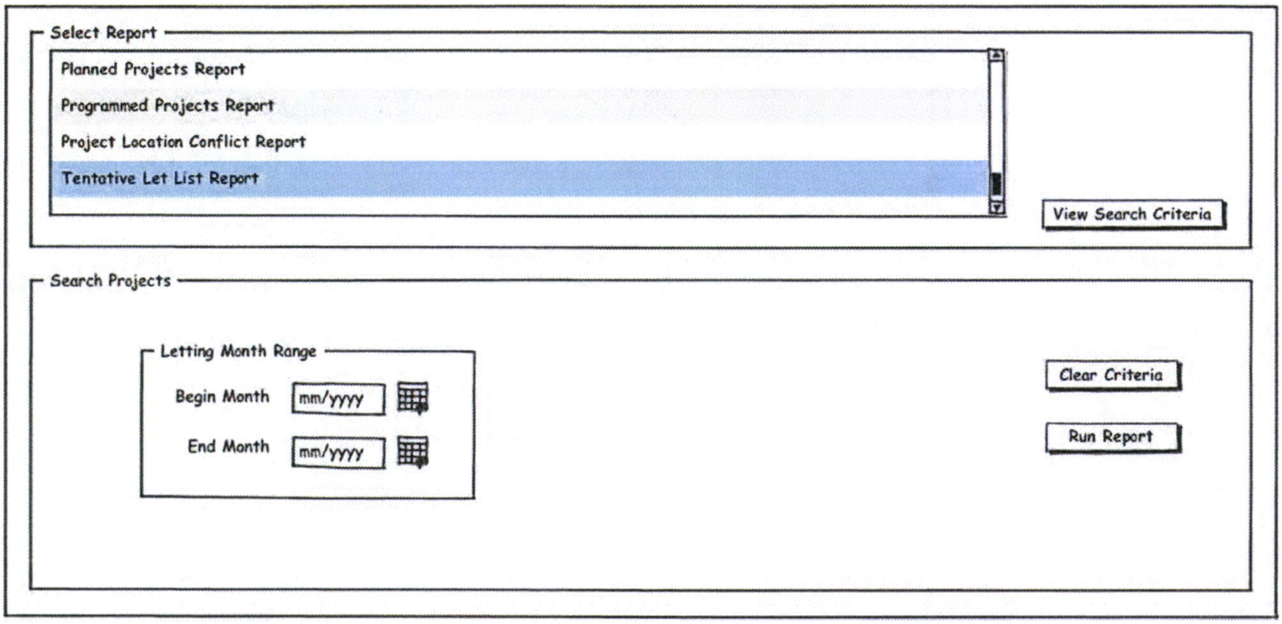

Figure 80 - Tentative Let List Report Search

The query options are as follows:

Letting Month Range – Within this group box the user is required to specify a begin month/year and an end month/year for which each of the tentative let list reports will be generated. The begin month/year entered must be either the same as the current system month/year or a month/year that occurs after the current system month/year. The end month/year entered must be the same as the begin month/year or a month/year that occurs after the specified begin month/year. The end month/year may be no more than 18 months after the begin month/year.

In addition to the user specified criteria options, the system will add the following internal criteria filters when generating the report.

- Only Active Projects will be included in the report
- A Project must have a value specified for the Proposed Letting Date
- A Project must have at least one Construction work phase associated with it, where the "Include in Letting" flag is checked for the work phase.

<u>**Buttons within Criteria Interface**</u>

Clear Criteria – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.

Run Report - After entering search criteria, the user may select the **Run Report** button to generate PDF report files that includes all projects returned by the search. The report files generated are one per month in the letting month range specified and five for the improvement type categories. Upon selection of the **Run Report** button the user will be presented with a page that displays links to each of the generated tentative let list reports. The user may click on the links individually to review each PDF report file. From this page the user may also specify to post the reports.

The following mockup is an example of the Tentative Let List Report listing page:

TENTATIVE LET LIST REPORTS
October 2011 - March 2012

Date Generated: 09/16/2011

Monthly Reports

- October 2011 Tentative Let List Report
- November 2011 Tentative Let List Report
- December 2011 Tentative Let List Report
- January 2012 Tentative Let List Report
- February 2012 Tentative Let List Report
- March 2012 Tentative Let List Report

Improvement Type Category Reports

- Bridge Tentative Let List Report
- Enhancement Tentative Let List Report
- Operational Tentative Let List Report
- Rehabilitation & Resurfacing Tentative Let List Report
- Widening & Safety Improvements Tentative Let List Report

[Post Reports] [Close]

Figure 81 - Tentative Let List Reports Listing

From the above Tentative Let Listing Reports listing the user may click on each of the monthly and improvement type category report links to view each report individually. The following is a mockup of a monthly report:

SCDOT TENTATIVE LETTINGS
October 2011
Subject To Change Without Notice

Date Generated: 09/16/2011

Status	Let Date	Project ID	Project Name	County	Route	Work Type	Mileage	Termini From	Termini To
	10/2011	9039485	SC 174 Replace Bridge over Sand Creek	Charleston	SC174	Bridge Replacement	0.200	Russell Creek Road	Kitford Road
				Charleston	SC174	Bridge Approaches	0.200	Russell Creek Road	Kitford Road
	10/2011	9058372	SC 336 Intersection Improvements	Jasper	SC 336	Intersec. Improvements	0.800	Willis Dr	Low County Drive
			NOTE: CONTRACT HAS BEEN MOVED FROM 7/2011 LETTING						
	10/2011	9847362	Thermoplastic marks throughout Dist 1 & 2	District 1		Pavement Markings	100.0		
				District 2		Pavement Markings	100.0		
	10/2011	9898632	Rumble Strips on Various Routes in District 6	District 6		Pavement Markings	16.0		
			NOTE: NEW CONTRACT						

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Figure 82 - Tentative Let List Report - Monthly

The following is a mockup of an improvement type category report:

SCDOT TENTATIVE LETTINGS
ENHANCEMENT
October 2011 - March 2012
Subject To Change Without Notice

Date Generated: 09/16/2011

Status	Let Date	Project ID	Project Name	County	Route	Work Type	Mileage	Termini From	Termini To
	10/2011	9675483	Enhancement on S-51	Cherokee	S-51	Enhance	0.200	Thompson Street	Woodlawn Drive
	10/2011	9683928	Enhancement on S-1734	Cherokee	S-1734	Enhance	0.800	Bennett Street	SC 14
			NOTE: CONTRACT HAS BEEN REMOVED FROM LETTING						
	11/2011	9182736	Bicycle Pedestrian alont US78	Charleston	US 78	Bicycle Pedestiran	1.200	Bike Path on US 52	Bike Path on US 78
	11/2011	9238475	Enhancement on SC 28	McCormick	SC 28	Enhance	0.200	Mims Drive	McCormick Avenue
	01/2012	9048573	Enhancement on US 21	Lexington	US 21	Enhance	0.300	B Avenue	Evergreen Avenue
	03/2012	9047362	Enhancement on S-91	Lexington	S-91	Enhance	0.400	Gibson Road	Hendrix Street
	03/2012	9384762	Enhancmenet on S-78	Lexingon	S-78	Enhance	0.10	Lake Murray	Richland County Line
				Richland	S-78	Enhamce	0.10	Lexington County Line	Battery Road
			NOTE: CONTRACT HAS BEEN MOVED FROM 12/2011 LETTING						

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Figure 83 - Tentative Let List Report Listing - Improvement Type Category

Each project returned from the search results will be listed in the report, where the projects are grouped first by letting date and then by contract. Letting Months are visually separated in the report by a double line. Contracts are visually separated in the report by a single line. Within each contract grouping, the projects will be sorted by Project ID. If a project contains multiple route locations then these will be listed one per report row.

The following defines the fields included in the report at the Project level:

Status – This column is used to denote if a change has occurred to the listed contract since the last Tentative Let List report. The following defines the status symbols used in the report. Note that these symbols may change, but regardless of the symbols used, the following defines the possible status values of the contracts in the report.

- ▽ – This symbol denotes that the contract has been added since the previously generated report.
- ⬬ – This symbol denotes that the contract has been removed since the previously generated report.
- ◇ – This symbol denotes that the contract has been changed since the previously generated report. A contract will be denoted as changed when it's let date have been modified to a new month.

Let Date – This is the Proposed Letting Date for the project.

Project ID – This is the unique Project ID for the project.

Project Name – This is the name of the project.

The following defines the fields included in the report at the Location level. If the project is defined at the state, district or county level only with no associated routes, then values will only be reported in the County, Work Type and Mileage columns as defined below.

County – This is the County of the route. If the Project is defined at the state, district or county level only with no associated routes, then this column will contain the text "Statewide," the unique district numbers or the unique county names included in the project.

Route – This is the short description of the route, using the format <Short Route Type><Route Number><Short Route Auxiliary>. Examples are "US 17," "SC 1 ALT."

Work Type – This is the work type assigned to the route. If the project is defined at the state, district or county level only with no associated routes, then this column will be the Work Type for the project.

Mileage – This is the length of the route. It is calculated as the EMP – BMP for the route segment. If the project is defined at the state, district or county level only with no associated routes, then this column will be 0 or will be the mileage for the project if one has been entered.

Termini From – This is the termini description for the beginning of the route.

Termini To – This is the termini description for the ending of the route.

The functions available from the report include:

Post Reports –This button allows the user to post the tentative let listing reports to a share location. When this button is selected the user will be prompt to verify that they wish to post the tentative let listing reports. If the user selects to continue then the user will be prompted to specify a location to which to save all report PDF files. In addition to posting the PDF report files to a location, the system will also store the information within all of the reports to historical tentative let list report tables in the database. The contents of these historical tables will be used when generating the tentative let list reports to determine when to include a status symbol for a contract in the report. The system will keep a maximum of 12 instances of each report in the historical tables. For example, the system will save 12 instances of the March 2012 monthly report and 12 instances of the Bridge improvement type category report. Each time a new set of reports are posted, the system will automatically purge the oldest saved copy of each report type. If a set of tentative let list reports has already been posted for a begin/end month range and the user selects to post reports again for this same month range, then the system will simply replace the previously saved reports for this month range in the historical table. The system will not purge any reports saved in the historical tables in this case.

Close – This button closes the report window.

2.6.1.6 Letting List Report

The Letting List Report displays project and route details for all contracts with a proposed letting date within a user specified month. The report will contain details about each of the projects within each contract along with a listing of the routes within each project. Projects included in the report will be those with a proposed letting date in the user specified month which also contain a construction work phase that has been denoted as included in the letting of the project.

The user may run the Letting List Report by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that allows the user to specify the month for which to generate the Letting List Report. The following mockup shows the search interface for the Letting List Report:

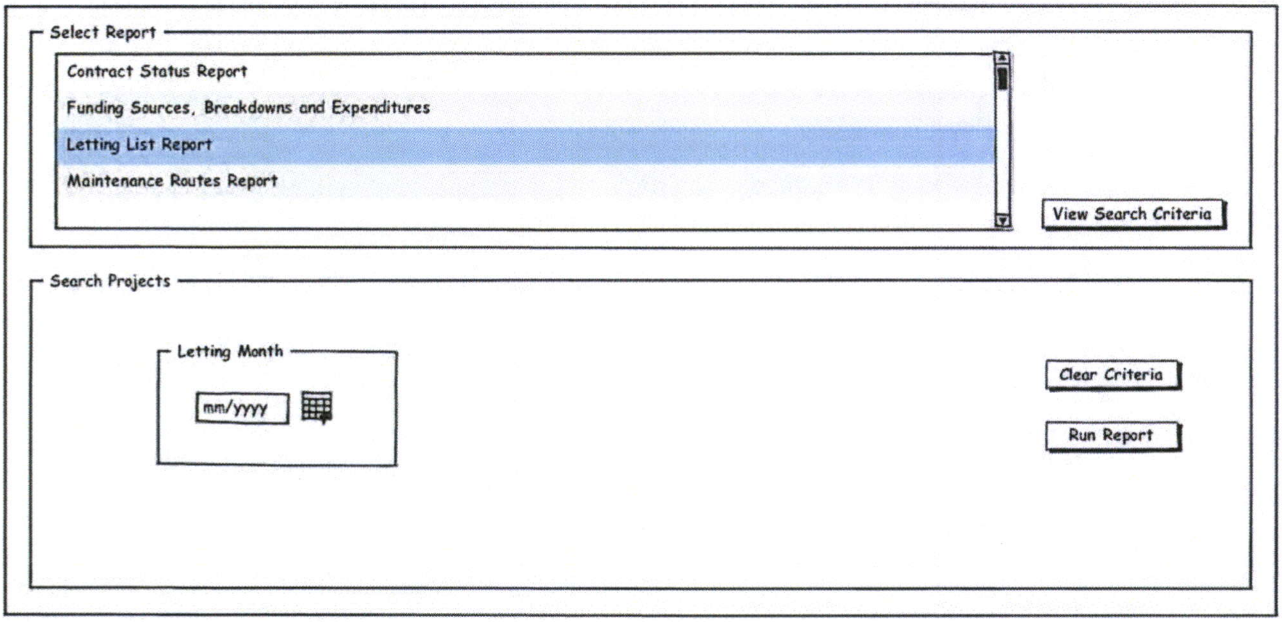

Figure 84 - Letting List Report Search

The query options are as follows:

Letting Month – The user must enter a month/year for which the report is to be generated. The month/year entered must be either the same as the current system month/year or a month/year that occurs after the current system month/year.

In addition to the user specified criteria options, the system will add the following internal criteria filters when generating the report:

- Only Active Projects will be included in the report.
- A Project must have a value specified for the Proposed Letting Date.
- A Project must have at least one Construction work phase associated with it, where the "Include in Letting" flag is checked for the work phase.

Buttons within Criteria Interface

Clear Criteria – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.

Run Report - After entering search criteria, the user may select the **Run Report** button to generate a Letting List Report in PDF format that includes all projects returned by the search.

The following mockup is an example of the Letting List Report:

LETTING LIST REPORT

October 2011

Date Generated: 09/16/2011

Let Date	Project ID	Project Name	Responsible Party	Commission Approval Date	Initial Authorization Date	Environmental Approval Date	County	Route	Work Type	Mileage	Termini From	Termini To
10/2011	9039485	SC 174 Replace Bridge over Sand Creek	Doe, Jane	7/28/2011	03/09/2011	5/14/2011	Charleston	SC174	Bridge Replacement	0.200	Russell Creek Road	Kitford Road
							Charleston	SC174	Bridge Approaches	0.200	Russell Creek Road	Kitford Road
10/2011	9058372	SC 336 Intersection Improvements	Doe, John	6/28/2011	3/11/2011	5/26/2011	Jasper	SC 336	Intersec. Improvements	0.800	Willis Dr	Low County Drive
10/2011	9847362	Thermoplastic marks throughout Dist 1 & 2	Name, Fake	6/25/2011	3/5/2011	5/20/2011	District 1		Pavement Markings	100.0		
							District 2		Pavement Markings	100.0		
10/2011	9898632	Runble Strips on Various Routes in District 6	Name, Fake	6/25/2011	3/5/2011	5/20/2011	District 6		Pavement Markings	16.0		

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Figure 85 - Letting List Report

Each project returned from the search results will be listed in the report, where the projects are grouped first by letting date and then by contract. Contracts are visually separated in the report by a single line. Within each contract grouping, the projects will be sorted by Project ID. If a project contains multiple route locations then these will be listed one per report row.

The following defines the fields included in the report at the Project level:

Let Date – This is the Proposed Letting Date for the project.

Project ID – This is the unique Project ID for the project.

Project Name – This is the name of the project.

Program Manager – This is the program manager for the project.

Commission Approval Date – This is the commission approval date for the project.

Initial Authorization Date – This is the initial authorization date for the project. The value reported here is the earliest Authorized Date for an "Initial" work phase funding source transaction for the project, where the work phase has been denoted as "Included in Letting."

Environmental Approval Date – This is the date of the environmental document approval for the project.

The following defines the fields included in the report at the Location level. If the project is defined at the state, district or county level only with no associated routes, then values will only be reported in the County, Work Type and Mileage columns as defined below.

County – This is the County of the route. If the Project is defined at the state, district or county level only with no associated routes, then this column will contain the text "Statewide," the unique district numbers or the unique county names included in the project.

Route – This is the short description of the route, using the format <Short Route Type><Route Number><Short Route Auxiliary>. Examples are "US 17," "SC 1 ALT."

Work Type – This is the work type assigned to the route. If the project is defined at the state, district or county level only with no associated routes, then this column will be the Work Type for the project.

Mileage – This is the length of the route. It is calculated as the EMP – BMP for the route segment. If the project is defined at the state, district or county level only with no associated routes, then this column will be 0 or will be the mileage for the project if one has been entered.

Termini From – This is the termini description for the beginning of the route.

Termini To – This is the termini description for the ending of the route.

2.6.1.7 Project Financial Report

The Project Financial Report provides details on the financial funding amounts for the Preliminary Engineering, Right of Way and Construction work phases of a project at the work phase funding source level.

The user may run the Project Financial Report by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that assists the user in selecting the project to view in the Project Financial Report. The following mockup shows the search interface for the Project Financial Report:

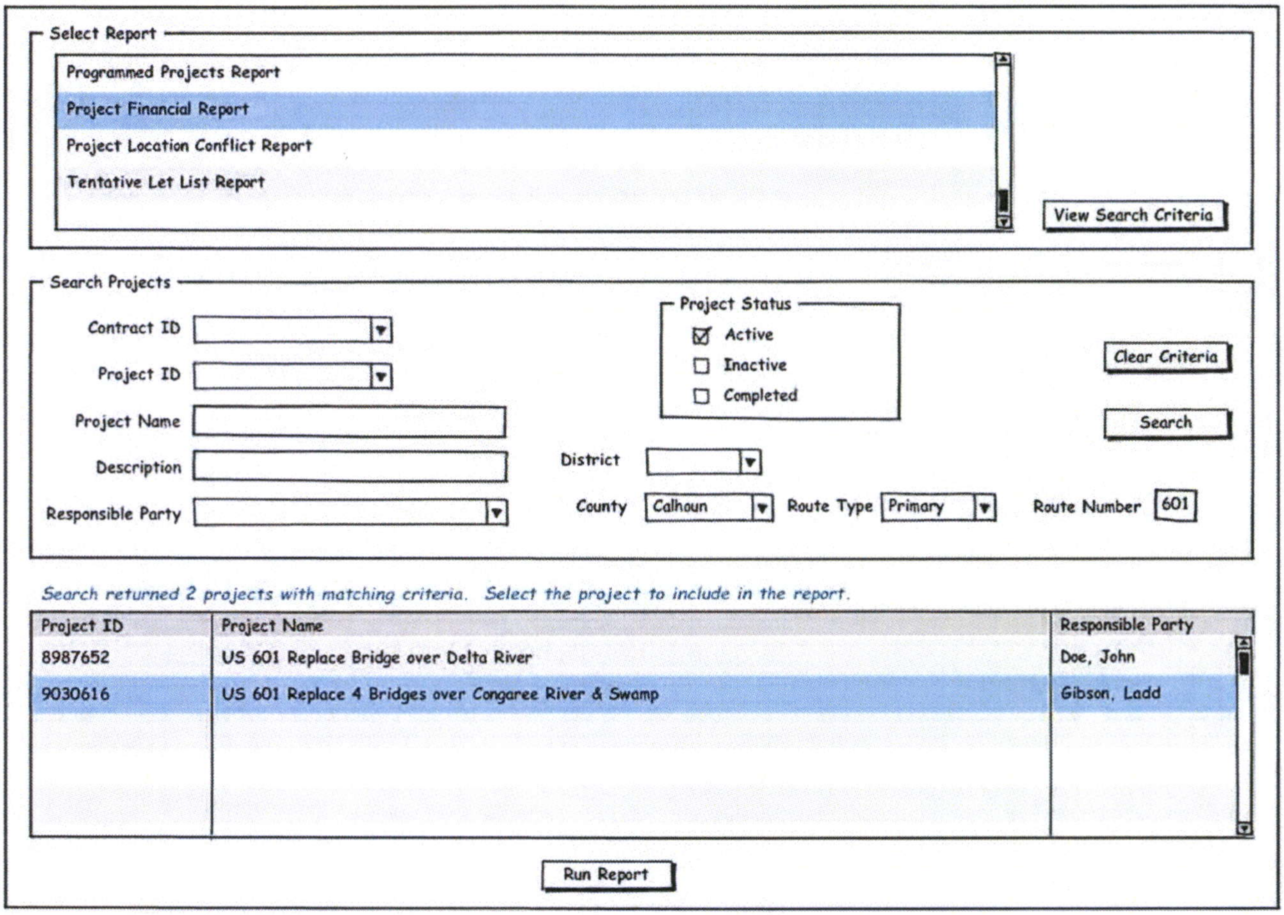


Figure 86 - Project Financial Report Search

The user may fill in as many of the search fields as desired. The query options are as follows:

Project Status – The user may select one or more of the project status types. The available Project Statuses include Active, Inactive and Completed. Active is selected by default. At least one project status must be selected for a report to be generated.

Contract ID – This is a drop down list box of Contract IDs.

Project ID – This is a drop down list box of Project IDs.

Project Name – This is a text box which allows the user to type in a project name or a portion of a project name.

Description – This is a text box which allows the user to type in a project description or a portion of a project description.

Program Manager – This is a drop down list box of all P2S users who are program managers.

District – This drop down box is a list of Districts 1-7.

County – This drop down box is a list of counties in South Carolina.

Route Type – This drop down box is a list of route types. The available route types include Interstate, Primary (US or SC) and Secondary.

Route Number – This numeric entry field allows the user to type in a route number.

The functions on this screen are as follows:

Clear Criteria – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.

Search – This button will display a table of search results in the lower portion of the screen. The user will have the option to select a project from the table to display in the report.

Run Report – This button will generate the Project Financial Report containing the selected project. The report will open in a new window in the PDF format.

The following mockup shows the resulting report if the user selects the second project in the list and presses the Run Report button:

PROJECT FINANCIAL REPORT

Date Generated: 06/16/2011

Project ID: 9030616

Responsible Party: Gibson, Ladd

Project Name: US 601 Replace 4 Bridges over Congaree River & Swamp

Office: RPG 3 - Midlands

Project Location: Calhoun

Contract ID: 9030616

PE

Program	Initial Date	Funding	Total Obligation	Federal Obligation	State Obligation	Other Obligation	Charge Code	Expenditures	Variance
Bridge Replacement	12/03/2003	Q120-BRT	$2335149.21	$1868119.37	$467029.84	$0.00	88Q120BR88042	$2313907.04	$21242.17
Bridge Replacement	06/04/2008	L1C0-BRP	$399394.42	$319515.54	$79878.88	0.00	88L1C0BR88042	$399394.42	$0.00
Bridge Replacement	06/06/2009	H120-BRT	$92021.38	$73617.10	$18404.28	$0.00	88H120BR88042	$5394.69	$86626.69
		TOTAL	$2826565.01	$2261252.01	$565313.00	$0.00		$2718696.15	$107868.86

RW

Program	Initial Date	Funding	Total Obligation	Federal Obligation	State Obligation	Other Obligation	Charge Code	Expenditures	Variance
Bridge Replacement	03/20/2006	L1C0-BRP	$56408.84	$45127.07	$11281.77	$0.00	88L1C0BR88042	$39834.00	$16574.84
		TOTAL	$56408.84	$45127.07	$11281.77	$0.00		$45127.07	$11281.77

CON

Program	Initial Date	Funding	Total Obligation	Federal Obligation	State Obligation	Other Obligation	Charge Code	Expenditures	Variance
Bridge Replacement	04/07/2010	L1CR-BRP	$27982521.25	$22386017.00	$5596504.25	$0.00	88L1CRBR88042	$18739.55	$35113813.50
Bridge Replacement	04/07/2010	H050-NHS	$3316339.49	$2653071.59	$663267.90	$0.00	88H050BR88042	$5718.32	$3310621.17
Bridge Replacement	04/07/2010	L00E-EAP	$3655800.27	$2924640.22	$731160.05	$0.00	88L00EBR88042	$0.00	$3655800.27
Bridge Replacement	06/16/2010	L1CE-BRP	$7150031.80	$5720025.44	$1430006.36	$0.00	88L1CEBR88042	$0.00	$7150031.80
Bridge Replacement	06/16/2010	L050-NHS	$250000	$250000	$0.00	$0.00	88L050BR88042	$1726.41	$248273.59
		TOTAL	$42354692.81	$33933754.25	$8420838.56	$0.00		$26184.28	$42328508.53
		Project TOTAL	$45,237,666.66	$36,240,133.33	$8,997,533.33	$0.00		$2,784,714.43	$42,452,952.23

Figure 87 - Project Financial Report

Report entries for a project are first grouped by work phase. Within in work phase, entries are group by the funding source.

The following defines the header fields in the report.

Project ID – This is the unique Project ID for the project.

Project Name – This is the name of the project.

Project Location – This is the location of the project. Based upon how the location of the project is defined, this field will contain the value "Statewide," a list of Districts or a list of Counties.

Program Manager – This is the P2S user who is responsible for the project.

Office – This is the Office of the program manager.

Contract ID – This is the Contract of the project.

The Project Financial Report contains funding information grouped by PE, RW and CON work phases. Within each work phase, funding totals are reported for each work phase funding source for the project. The following defines the fields within in grouping.

Program – This is the program for the work phase funding source.

Initial Date – This is the initial date for the work phase funding source. It is set to be the earliest authorization date for all "Initial" transactions of the work phase funding source. If no authorization date exists, then it is set to be the earliest proposed obligation date for all "Initial" transactions of the work phase funding source.

Funding – This is the funding source for the work phase. It is comprised of both the Funding Category and the Funding Code, using the format: <Funding Code> - <Funding Category>.

Total Obligation – This is the sum of the Obligation Amount for all transactions of the work phase funding source.

Federal Obligation – This is the sum of the Federal portion of the Total Obligation for all transactions of the work phase funding source.

State Obligation – This is the sum of the State portion of the Total Obligation for all transactions of the work phase funding source.

Other Obligation – This is the sum of the Other portion of the Total Obligation for all transactions of the work phase funding source.

Charge Code – This is the charge code for the work phase funding source.

Expenditures – This is the total expenditures for the work phase funding source.

Variance – This is the variance between the total obligate funds and the total expenditures for the work phase funding source.

2.6.1.8 *Obligations Management PR2 Report*

The Obligations Management PR2 Report provides details on the financial funding amounts for a single project. The report is comprised of two pages. The first page contains details on the funding sources for the project while the second page contains details on all route locations of the project.

The user may run the PR2 Report by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that assists the user in selecting the project to view in the PR2 Report. The following mockup shows the search interface for the PR2 Report.

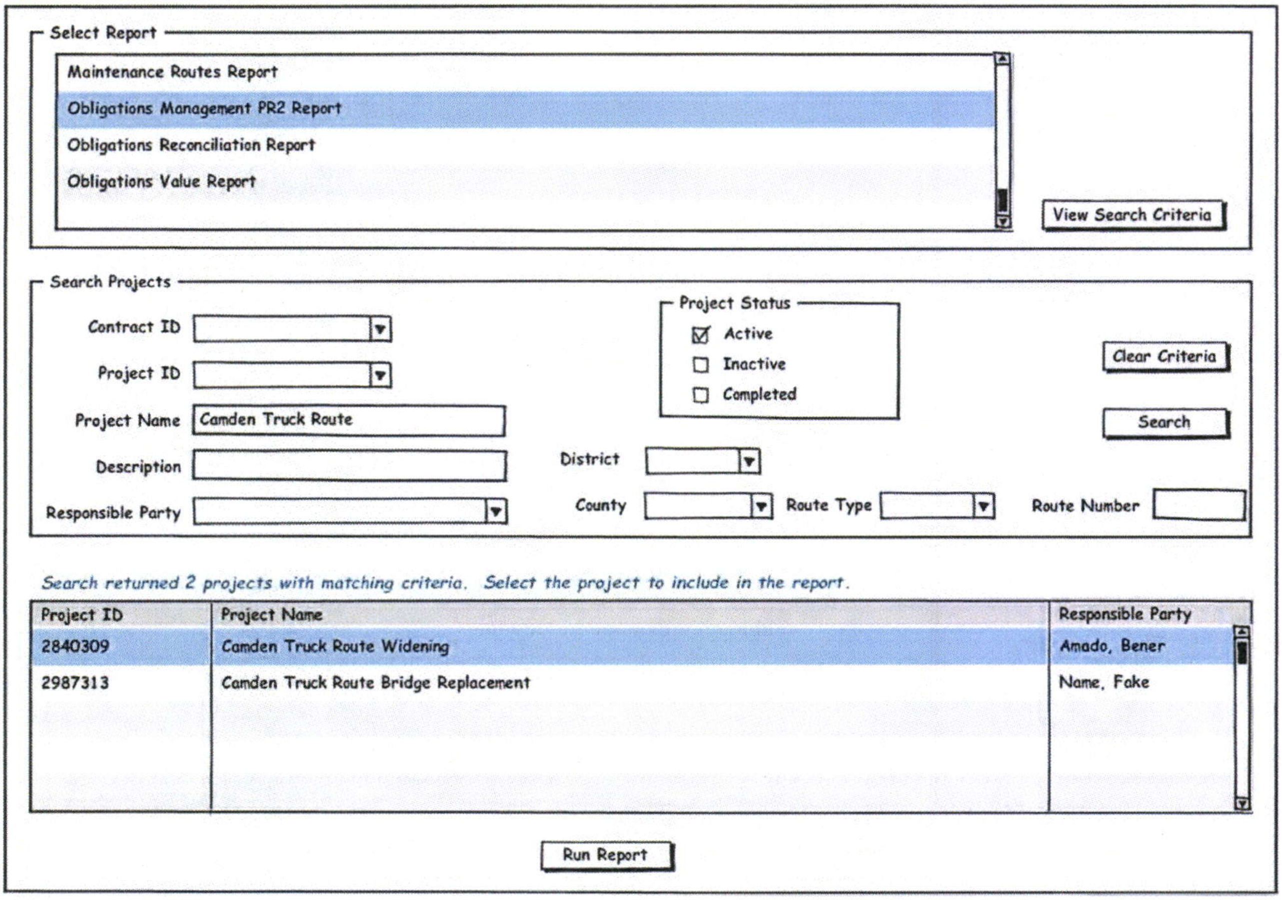


Figure 88 - PR2 Report Search

The user may fill in as many of the search fields as desired. The query options are as follows:

Project Status – The user may select one or more of the project status types. The available project statuses include Active, Inactive and Completed. Active is selected by default. At least one project status must be selected for a report to be generated.

Contract ID – This is a drop down list box of Contract IDs.

Project ID – This is a drop down list box of Project IDs.

Project Name – This is a text box which allows the user to type in a project name or a portion of a project name. A wildcard search will be performed on the entered text.

Description – This is a text box which allows the user to type in a project description or a portion of a project description. A wildcard search will be performed on the entered text.

Program Manager – This is a drop down list box of all P2S users who are program managers.

District – This drop down box is a list of Districts 1-7.

County – This drop down box is a list of counties in South Carolina.

Route Type – This drop down box is a list of route types. The available route types include Interstate, Primary (US or SC) and Secondary.

Route Number – This numeric entry field allows the user to type in a route number.

The functions on this screen are as follows:

Clear Criteria – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.

Search – This button will display a table of search results in the lower portion of the screen. The user will have the option to select a project from the table to display in the report.

Run Report – This button will generate the PR2 Report containing the selected project. The report will open in a new window in PDF format. Prior to generating the report a popup window will be displayed to the user to allow the user to enter Remarks text to include in the PR2 Report. The following is a mockup of this popup:

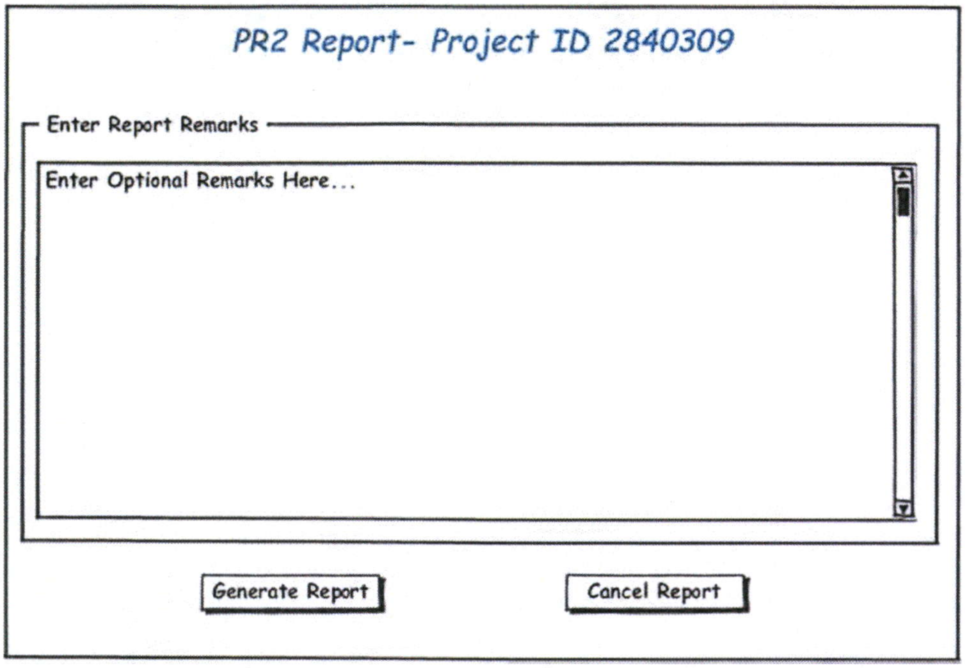


Figure 89 - PR2 Report Remarks Entry Interface

The user is not required to enter any remarks text in this interface. If remarks are entered, then they are included in the PR2 report on the second page. The Remarks field will allow the user to enter as many characters that will fit on the 2nd page of the PR2 report within the remarks field.

The following defines the buttons available in this interface:

Generate Report – When selected the PR2 Report is generated. If remarks are entered in this interface then they will be included on the second page of the report.

Cancel Report – When selected the generation of the PR2 report is cancelled.

The following mockup shows the first page of the resulting PR2 report if the user selects the first project in the list and selects the **Run Report** button:

SCDOT
Project Authorization Agreement
PR2 Date: 06/16/2011

Project ID: 2840309
Project Name: Camden Truck Route Widening
Description: Widening of 3 segments along the existing Truck Route in the City of Camden

Contract ID:
Program Manager: Amado, Bener
Office: RPG 2 - Pee Dee
LPA:

☐ New Project
☑ Modify Project
☐ Close Project
☐ Reopen Project

Summarized Location Information

County	Route	BMP	EMP	NHS	Region	Functional Class	System Code
Kershaw	S-897	0.00	1.30	☐	Urban	Minor Arterial	Not on F.A. Hwy

Congr. Districts

District 1 25%
District 2 75%

Environmental Information

Document Type: CE-FHWA Documentation
Approval Date: Year 2011 Month Day 0501

Bridge / Railroad Information

County	Route	MP	Structure	Rating	RR Crossing
Kershaw	S-45	2.56	2870004500100	58.6	

STIP Reference

STIP Item: Camden Truck Route
STIP Page: D1-28-P1
STIP Revision: 17

Funding Code: Q770 Charge Code: 28Q77028403092220.6

Work Phase	Impr. Type	Contract	Former Total	Total Variance	New Total	Fed Percent	Former Federal	Federal Variance	New Federal	State Funds	Other Funds	Auth. Date
PE	15	☑	$898,890.53	$0.00	$898,890.53	80%	$719,112.42	$0.00	$719,112.42	$179,778.11	$0.00	05/15/2010
RW	16	☐	$0.00	$500,000.00	$500,000.00	80%	$0.00	$400,000.00	$400,000.00	$100,000.00	$0.00	06/15/2011
		TOTAL	$898,890.53	$500,000.00	$1,398,890.53		$719,112.42	$400,000.00	$1,119,112.42	$279,778.11	$0.00	

Funding Code: Q760 Charge Code: 28Q76028403092220.6

Work Phase	Impr. Type	Contract	Former Total	Total Variance	New Total	Fed Percent	Former Federal	Federal Variance	New Federal	State Funds	Other Funds	Auth. Date
PE	15	☑	$61,770.30	$2.19	$61,772.49	80%	$49,416.24	$1.75	$49,417.99	$12,354.50	$0.00	06/15/2011
		TOTAL	$61,770.30	$2.19	$61,772.49		$49,416.24	$1.75	$49,417.99	$12,354.50	$0.00	

Funding Code: L20E Charge Code: 28L20E28403092220.6

Work Phase	Impr. Type	Contract	Former Total	Total Variance	New Total	Fed Percent	Former Federal	Federal Variance	New Federal	State Funds	Other Funds	Auth. Date
PE	15	☑	$39,339.17	$1,499,997.8	$1,539,336.9	80%	$31,471.34	$1,199,998.2	$1,231,469.59	$307,867.39	$0.00	06/15/2011
RW	16	☐	$0.00	$100,000.00	$100,000.00	80%	$0.00	$80,000.00	$80,000.00	$20,000.00	$0.00	06/15/2011
		TOTAL	$39,339.17	$1,599,997.8	$1,639,336.9		$31,471.34	$1,279,998.2	$1,311,469.5	$327,867.39	$0.00	
		GRAND TOTAL	$1,000,000.00	$2,100,000.00	$3,100,000.00		$800,000.00	$1,680,000.00	$2,480,000.00	$620,000.00	$0.00	

The State agrees that as a condition to payment of the Federal funds obligated, it accepts and will comply with the agreement provisions set form in Title 23 - Highways, Code of Federal Regulation, Preconstruction Procedures 630.112; and its signature constitutes the making of the certifications.

Figure 90 - PR2 Report - Page 1

The first page of the PR2 report is comprised of the following three sections. These sections are the Header section, the General Information Section and the Funding Section. Each of these sections are described below:

2.6.1.8.1 Header Section

The header section provides project description and management information. Specific fields in this section are:

PR2 Date – This is the date the PR2 Report is generated.

Project ID – This is the unique ID value of the project.

Project Name – This is the name of the project.

Description – This is the description of the project.

Contract ID – This is the ID of the contract to which the project is associated.

Program Manager – This is the P2S user who is responsible for the Project.

Office – This is the Office of the Program Manager.

LPA – This is the Local Public Agency responsible for the work performed on this project.

Project Checkboxes – These four checkboxes denote the state of the project. The four checkboxes are: New, Modify, Close and Reopen. Only one of these will be checked for a project.

2.6.1.8.2 General Information Section

This section contains location, environmental and STIP information.

Summarized Location Information

In the Summarized Location Information area, the route with the most mileage is reported. Details on this route and any additional routes will also be reported on the second page of the report. The following defines the fields used to report the route with the most mileage.

County – This is the county of the route with the most mileage. If the Project is defined at the state, district or county level only with no associated routes, then this column will contain the text "Statewide," or a comma separated list of the unique district numbers or the unique county names included in the project.

Route – This is the route with the most mileage.

BMP – This is the beginning milepoint for the route with the most mileage.

EMP – This is the ending milepoint for the route with the most mileage.

Region – This field denotes if the route is either "Rural" or "Urban." This value will be pulled from the RIMS database at the time the report is generated. The logic used to determine the value to report in this field is as follows:

- If the RIMS Functional Class is one of the following then the value reported is "Rural"
  - "1- Rural -- Principal Arterial – Interstate"
  - "2- Rural -- Principal Arterial – Other"
  - "3- Rural -- Minor Arterial"
  - "4- Rural -- Major Collector"
  - "5-Rural -- Minor Collector"
  - "9-Rural -- Local"
- If the RIMS Functional Class is one of the following then the value reported is "Urban"
  - "11- Urban -- Principal Arterial – Interstate"
  - "12- Urban -- Principal Arterial - Other Freeways & Expressways"
  - "13- Urban -- Principal Arterial – Other"
  - "14- Urban -- Minor Arterial"
  - "15- Urban – Collector"
  - "18-Urban – Local"

If the reported segment encompasses more than one functional class value, then the value reported will be based on the functional class with the most mileage along the route segment.

NHS – This checkbox denotes if the route segment is on the NHS. If checked, then the route segment is on the NHS. This value will be pulled from the RIMS database at the time the report is generated. If the reported segment encompasses both portions of both NHS and non-NHS, then the value reported will be the one with the most mileage along the route segment.

Functional Class – This is the functional class of the route segment. This value will be pulled from the RIMS database at the time the report is generated. If the reported segment encompasses more than one functional class value, then the value reported will be the one with the most mileage along the route segment.

System Code – This is the System Code of the route segment. This value denotes if the route is Federal Aid Eligible or not. This value will be pulled from the RIMS database at the time the report is generated. The logic used to determine the value to report in this field is as follows:

- If the RIMS Functional Class is either "5-Rural -- Minor Collector", "9-Rural -- Local" or "18-Urban – Local" then the value reported is "Not on F.A. Hwy."
- If the RIMS Functional Class is not "5-Rural -- Minor Collector", "9-Rural -- Local" or "18-Urban – Local" then the value reported is "On F.A. Hwy."

If the reported segment encompasses more than one functional class value, then the value reported will be based on the functional class with the most mileage along the route segment.

Bridge/Railroad

The following defines the fields used to report the bridges and railroad crossings. If no bridge or railroad crossings are associated with a project, then this section will be empty. If there are additional bridge/railroad locations that do not fit on the first page then they will also be reported on the second page of the report.

County – This is the county of the location of the bridge or railroad crossing.

Route – This is the route on which the bridge or railroad crossing is located.

MP – This is the milepoint location on the route of the bridge or railroad crossing.

Structure – This is the structure number of the bridge.

Rating – This is the Bridge Sufficiency Rating for the bridge. This value will be pulled from the Structure table in the RIMS database based upon the Structure Number at the time the report is generated.

RR Crossing – This is the railroad crossing number.

Congressional Districts

This area lists all of the Congressional Districts that the projects falls in and the approximate percentage of how much of the project is in that District.

Environmental Information

Document Type – This is the type of Environmental Document needed for the project.

Approval Year – This is the year of approval.

Approval Month Day – This is the month of day of the approval.

STIP Reference

***STIP Item** – This is the STIP Item for the project.

***STIP Page** – This is the STIP Page for the project.

***STIP Revision** – This is the STIP Revision for the project.

***Note:** *STIP information may be reported in a different manner based on how the new STIP module is designed.*

2.6.1.8.3 Funding Section

This section contains funding details at the work phase funding source level. Funding is grouped by the funding source and then the work phase.

The following two fields are reported at the funding source level:

Funding Code – This is the funding code for the funding amounts reported in the associated table.

Charge Code – This is the charge code for the funding amounts reported in the associated table.

The following fields are reported at the work phase level within a funding source:

Work Phase – This is the work phase. Examples are PE, ROW, CON.

Impr. Type – This is the improvement type of the work phase. It is reported as the improvement type ID value instead of the textual improvement type name.

Contract – This checkbox denotes if the funds are to be obligated for contract work or for SCDOT labor. When checked, the funds are to be used for contract work.

Former Total – This is the former total funding amount for the work phase. This value is calculated as the sum of the Obligation Amounts for all funding transactions for the work phase and funding source where the Obligation Status is set to "Authorized."

Total Variance – This is the difference between the former total funding amount and the new total funding amount. This value is calculated as the sum of the Obligation Amounts for all funding transactions for the work phase and funding source where the Obligation Status is *not* set to "Authorized."

New Total – This is the new total funding amount for the work phase. This value is calculated as the sum of the Obligation Amounts for all funding transactions for the work phase and funding source.

Fed Percent – This is the percentage of funding that comes from Federal sources.

Former Federal – This is the former total funding from federal sources for the work phase. This value is calculated as the Former Total amount multiplied by the Federal Percent.

Federal Variance – This is the difference between the former total funding from federal sources and the new total funding from federal sources.

New Federal – This is the new total funding from federal sources for the work phase. This value is calculated as the New Total amount multiplied by the Federal Percent.

State Funds – This is the funding amount that comes from State sources. This value is calculated as the sum of the State Portion of the Obligation Amounts for all funding transactions for the work phase and funding source.

Other Funds – This is the funding amount that comes from Other sources. This value is calculated as the sum of the Other Portion of the Obligation Amounts for all funding transactions for the work phase and funding source.

Auth. Date – This is the earliest authorization date for the work phase of the funding source.

The second page of the PR2 Report is used to report the remarks entered by the user when the report is generated along with details on all routes and bridge/railroad locations associated with the project, including the route, bridges and railroads reported on the first page. The following is a mockup of an example of the second page of the PR2 Report:

SCDOT Project Authorization Agreement

PR2 Date: 06/16/2011

Project ID: 2840309
Project Name: Camden Truck Route Widening
Description: Widening of 3 segments along the existing Truck Route in the City of Camden

Contract ID:
Program Manager: Amado, Bener
Office: RPG 2 - Pee Dee
LPA:

☐ New Project
☑ Modify Project
☐ Close Project
☐ Reopen Project

Remarks

These are the remarks entered by the user on the popup window when generating the report.

Location Information

County	Route	BMP	EMP	Region	NHS	Commission District	Functional Class	System Code
Kershaw	S-13	0.000	1.300	Urban	No	District 5	Minor Arterial	Not on F.A. Hwy
Kershaw	S-45	2.400	2.900	Urban	No	District 5	Minor Arterial	Not on F.A. Hwy
Kershaw	S-130	2.300	3.900	Urban	No	District 5	Minor Arterial	Not on F.A. Hwy

Bridge / Railroad Information

County	Route	MP	Structure	Rating	RR Crossing
Kershaw	S-45	2.560	2870004500100	58.6	

The State agrees that as a condition to payment of the Federal funds obligated, it accepts and will comply with the agreement provisions set form in Title 23 - Highways, Code of Federal Regulation, Preconstruction Procedures 630.112; and its signature constitutes the making of the certifications.

Figure 91 - PR2 Report - Page 2

The following defines the fields reported in the second page of the PR2 report:

Remarks – This box displays the remarks entered by the user at the time the report was generated.

Location Information – This box displays details on *all* routes associated with the project, including the route reported on the first page of the report. The fields reported for each route will be the same as the fields reported for the route with the most mileage on the first page of the report.

Bridge / Railroad Information – This box displays details on *all* bridge and railroad crossings associated with the project, including the ones reported on the first page of the report. The values reported for each bridge or railroad location will be the same as the values reported for bridges and railroads on the first page of the report.

2.6.1.9 Planned Projects Report

The Planned Projects Report displays details about all projects that are planned, but not yet programmed. A project will show up in this report if initial information has been entered about the project, but a request to obligate funding has not yet been made. The report will list the office, project ID, project name, general funding type, location and proposed start date for each project that meets the user entered criteria in a printer-friendly PDF format.

The user may run the Planned Projects Report at any time by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that assists the user in selecting the projects to include in report. The following mockup shows the search interface for the Planned Projects Report:

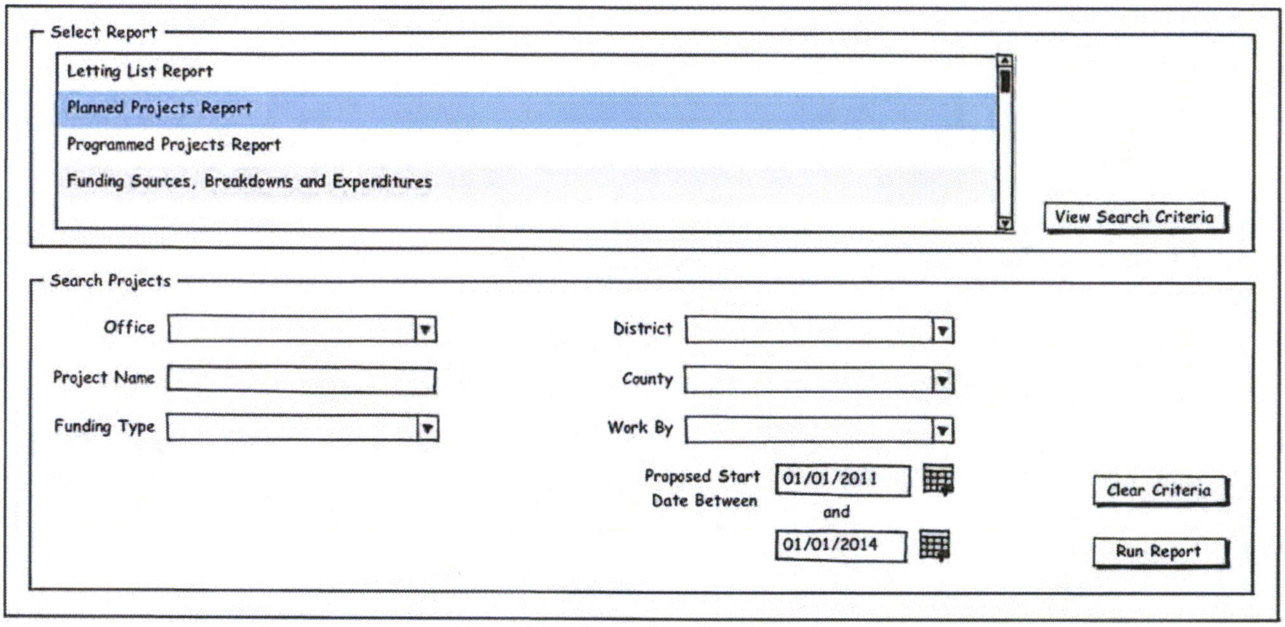


Figure 92 - Planned Projects Search

The user may fill in as many of the search fields as desired. The query options are as follows:

Office – This is a drop down list of SCDOT offices.

Project Name – This is a free form key-in field. A wild card search will be executed on whatever text is entered. For example, if the user enters only the text "Rehabilitation," any project with the word Rehabilitation will be shown in the results.

Funding Type – This is a drop down list containing the funding types available for selection.

District – This is a drop down list containing the names of the Engineering Districts.

County – This is a drop down list containing the names and numbers of all counties in South Carolina.

Work By – This is a drop down list which identifies the party performing the work. The three options are:

- SCDOT
- Consultant Firm
- Local Public Agency (LPA)

Proposed Start Date Between – This is a date range locating projects between the dates entered.

Buttons within Criteria Interface

Clear Criteria – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.

Run Report - After entering search criteria, the user may press the Run Report button to generate a PDF report that includes all projects returned by the search. The following mockup shows the resulting report based on the search criteria entered:

South Carolina Department of Transportation
PLANNED PROJECTS REPORT
06/20/2011

Search Criteria: **Planned Projects**
Proposed Start Date between **01/01/2011** and **01/01/2014**

Office	Project ID	Project Name	General Funding Type	Location	Proposed Start Date
Maintenance	0381700	I-26 EB/WB Rehabilitation (MM 115 - 125)	State	Calhoun, Lexington	01/10/2012
Maintenance	0393637	I-526 (Mark Clark Expressway) Rehabilitation	State	Charleston	10/12/2011
Maintenance	0386450	I-95 Rehabilitation (ARRA)	Federal	Clarendon	07/08/2013
Maintenance	0371760	I-585 Interstate Rehabilitation	State	Spartanburg	11/21/2012
Pre-Construction	0382263	S-379 (Ohear Ave) Bridge Replacement	State	Charleston	02/26/2013

Figure 93 - Planned Projects Report

The title of the report and the date that the report was generated will be shown at the top of the page. The search criteria will be printed above the results table. Each planned project returned by the search will be listed in the table, grouped by office.

The following information about each project will be included in the report:

Office – The office that is responsible for the project.

Project ID – The 7-digit project ID number.

Project Name – The project description, as listed on the project General tab.

General Funding Type – The project general funding type (State, Federal or CTC), as listed on the project General Tab.

Location – A comma-delimited list of all counties or districts included in the project. If the project is defined at the state level, then this column will contain the text "Statewide."

Proposed Start Date – The proposed start date for the project, as listed on the project General Tab.

2.6.1.10 Programmed Projects Report

The Programmed Projects Report displays details about all projects that are programmed. A project will show up in this report if a request to obligate funding has been made. The report will list the office, project ID, project name, general funding type, location, and proposed letting date for every project that meets this criteria. It will also summarize the funding details for each phase of each project. This information will be presented in a printer-friendly PDF format.

The user may run the Programmed Projects Report at any time by selecting it from the Reports → Standard Reports list box. After selecting the **View Search Criteria** button, a search interface will appear that assists the user in selecting the projects to include in report. The following mockup shows the search interface for the Programmed Projects Report:

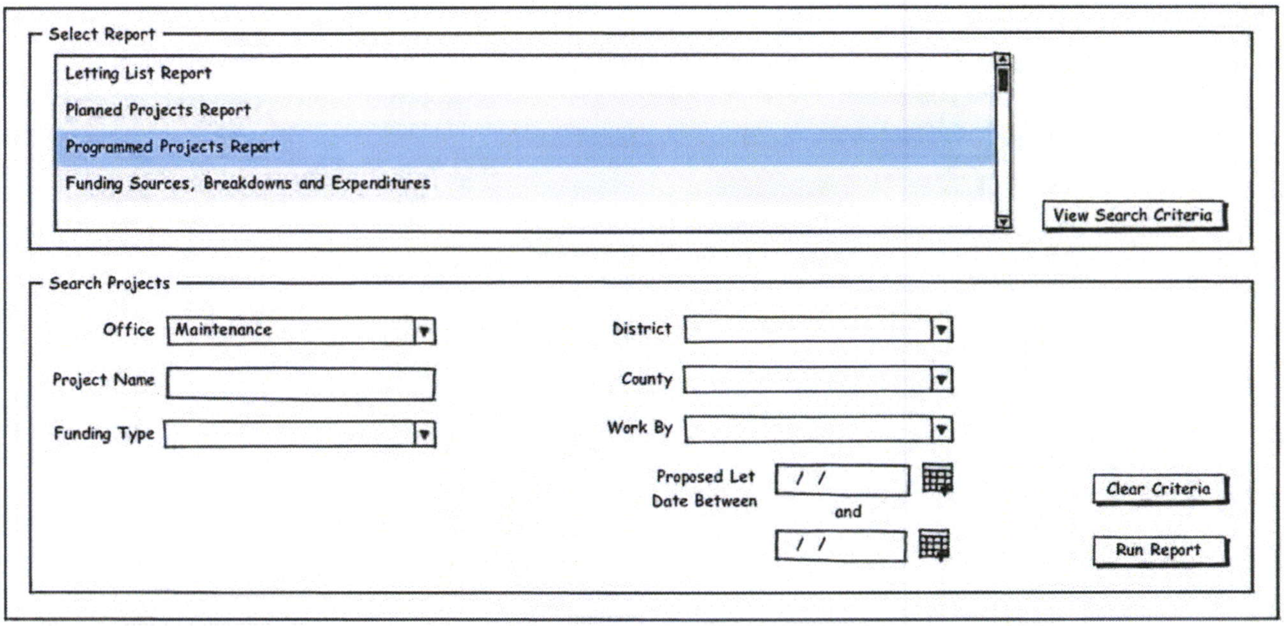


Figure 94 - Programmed Projects Search

The user may fill in as many of the search fields as desired. The query options are as follows:

Office – This is a drop down list of SCDOT offices.

Project Name – This is a free form key-in field. A wild card search will be executed on whatever text is entered. For example, if the user enters only the text "Rehabilitation," any project with the word Rehabilitation will be shown in the results.

Funding Type – This is a drop down list containing the funding types available for selection.

District – This is a drop down list containing the names of the Engineering Districts.

County – This is a drop down list containing the names and numbers of all counties in South Carolina.

Work By – This is a drop down list which identifies the party performing the work. The three options are:

- SCDOT
- Consultant Firm
- Local Public Agency (LPA)

Proposed Let Date Between – This is a date range locating projects between the dates entered.

Buttons within Criteria Interface

Clear Criteria – Selecting this button clears any user entered criteria from the screen so that the user can build a new query.

Run Report - After entering search criteria, the user may click the **Run Report** button to generate a PDF report that includes all projects returned by the search. The following mockup shows the resulting report based on the search criteria entered:

South Carolina Department of Transportation
PROGRAMMED PROJECTS REPORT
06/20/2011

Search Criteria: Programmed Projects
Office = Maintenance

Office: Maintenance Funding: State	Project ID: 1234567 Location: York	Name: Rehab in York County Proposed Let Date: 09/16/2010	
Phase	**Obligation Date**	**Authorization Date**	**Total Obligation Amount**
ROW		03/10/2010	$5,100,000.00
Road Construction		06/01/2010	$16,095,705.00
Bridge		03/10/2010	$2,100,500.00

Office: Maintenance Funding: Federal	Project ID: 0371745 Location: Richland	Name: I-20 EB Rehabilitation Proposed Let Date: 12/12/2009	
Phase	**Obligation Date**	**Authorization Date**	**Total Obligation Amount**
Preliminary Engineering		01/20/2007	$894,140.00
Utilities		06/15/2008	$3,402,060.00
Road Construction		09/01/2009	$7,550,800.00

Office: Maintenance Funding: State	Project ID: 0387430 Location: Richland	Name: I-77 NB Rehabilitation Proposed Let Date: 09/16/2010	
Phase	**Obligation Date**	**Authorization Date**	**Total Obligation Amount**
Preliminary Engineering	03/2009		$355,000.00
Utilities	08/2009		$1,506,000.00
Road Construction	04/2010		$1,861,000.00

Figure 95 - Programmed Projects Search

The title of the report and the date that the report was generated will be shown at the top of the page. The search criteria will be printed above the results table. Each programmed project returned by the search will be listed in the table header along with its office, ID number, name, general funding type, location and proposed letting date. Under each header will be listed the obligation/authorization date and total obligated amount for each phase of the project.

The following information about each project will be included in the report table header:

Office – The office that is responsible for the project.

Project ID – The 7-digit project ID number.

Name – The project description, as listed on the project General tab.

Funding – The project general funding type (State, Federal or CTC), as listed on the project General Tab.

Location – A comma-delimited list of all counties or districts included in the project. If the project is defined at the state level, then this column will contain the text "Statewide."

Proposed Let Date – The proposed letting date for the project, as listed on the project General Tab.

The following information about each project phase will be included in the report table:

Phase – The name of the project work phase, as listed on the Work Phases tab.

Obligation Date – The earliest proposed obligation date out of all of the work phase's funding transactions. If funding has been authorized for the project, this column will be left empty.

Authorization Date – The earliest authorization date of all of the work phase's funding transactions. If no funding has yet been authorized, this column will be left empty.

Total Obligated Amount – The total amount of money obligated for all of the work phase's funding transactions.

2.6.2 Advanced Reports

P2S will provide the ability for users to search and query the system from an ad-hoc query and reporting tool called Advanced Reports. All pertinent information within the project programming database will be available for query. The capability to include logical operators will exist for queries, along with several options for output. Users will have the ability to select specific columns to be included in the output as well as choose whether the report will be in tabular format (i.e. HTML), displayed on a map, or both.

The user may run the Advanced Report at any time by going to the Reports → Advanced Reports sub-menu. The opening screen will be a query builder interface that assists the user in constructing a custom search. The following mockup shows the available query options:

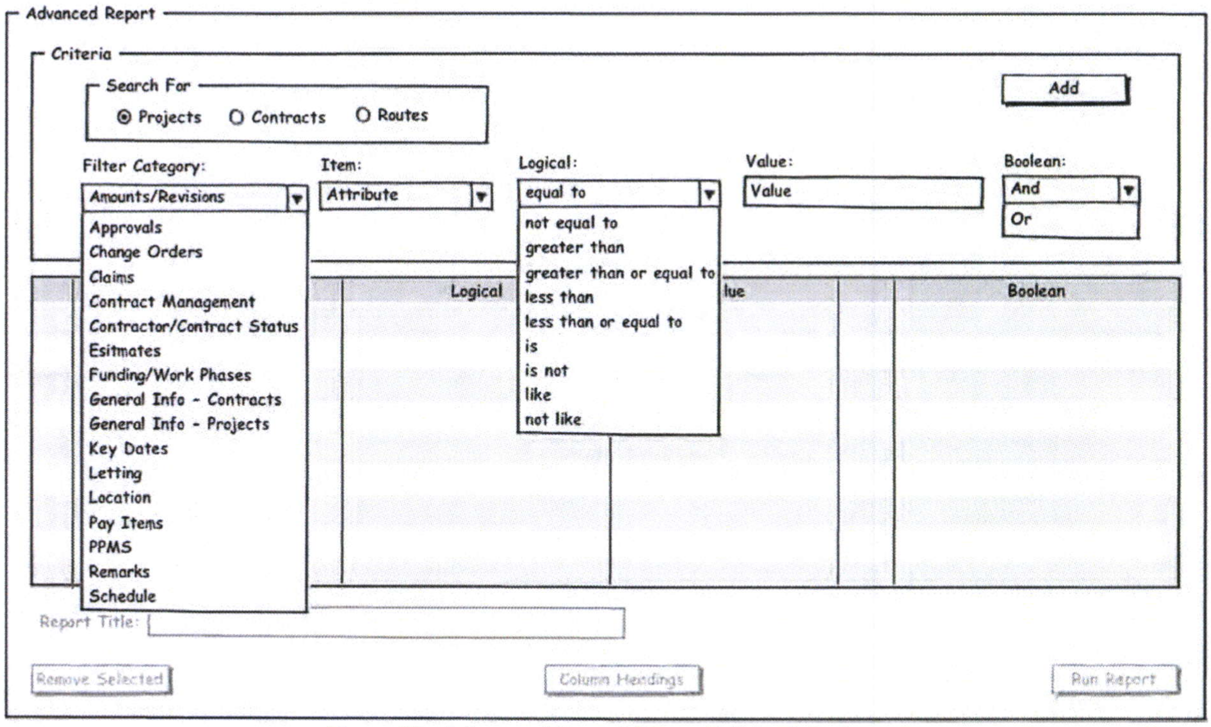


Figure 96 - Advanced Report Query Builder Interface

When constructing a search, the user would move from left to right through the options on this screen. First, they would decide whether to search for projects, contracts or routes. Then, they would pick a Filter Category. The Filter Category is similar in function to choosing a database table name, without requiring in-depth knowledge of the structure of the various databases that store information used by P2S. For example, if the user wants to do a search for contracts based on original contract amount, they need not know that that information is stored in SiteManager in the T_CONT table. They only need to pick "Amounts/Revisions" as the filter category. At this point, a list of attributes related to monetary information for contracts will appear in the Item drop-down box. The Item list is similar in function to choosing a database table column. However, the attributes in the Item list will be given descriptive names instead of actual table column names.

Next, the user would choose a Logical operator from the drop down box, and type a Value in the text box. If the user was looking for current contract amounts over one million, then they would choose "greater than" from the Logical drop down box, and type 1000000 in the Value text box. Finally, the user would choose a Boolean value of "and" or "or." The Boolean value is only applicable when joining more than one search phrase together. For example, if the user also wanted to include contracts with an Amount of Adjustments over $100,000 in the search, they could choose "and" and select the **Add** button. This will add the first search phrase to a list at the bottom of the screen. Then the user would construct a second search phrase by entering all the same values except this time choosing "Amount of Adjustments" from the Item drop-down. After selecting the **Add** button a second time, the resulting search string stated as a sentence would be: Find **Contracts** where the **Current Contract Amount** is *greater than* **1,000,000** *and* the **Amount of Adjustments** is *greater than* **100,000.** The user may continue appending as many phrases as desired.

The search options on this screen include:

Search For – This group of radio buttons determines whether the power search will return a list of projects or a list of contracts.

Filter Category – This drop down box is a list of categories used to filter the Item drop down box.

Item – This drop down box allows the user to specify the attribute that will be searched. The attributes will be filtered according to the selected filter category.

Logical – This drop down box allows the user to specify the logical operator (greater than, less than, equal to, etc.) that will be used in the search phrase.

Note: The user may incorporate wildcards in the search with the use of the "like" or "not like" operators. For example, the user may run a search for **Projects** where **Project Name** is *like* **"rehab."** The "like" or "not like" logical operators will only show up in the list if the user has selected a character string search attribute.

Value – This text box allows the user to type in the value that will be searched for within the selected database table column. If the search attribute selected is a code-list, then the Value field will be a drop-down list, allowing the user to select the appropriate code-list value.

Boolean – This drop down box allows the user to specify the Boolean value (and/or) that will be used to string search phrases together.

Add – This button adds the search phrase to the table at the bottom of the screen. It is enabled once the first search criteria has been filled in.

Filter Categories
The Filter Categories are based on the tab names in the contract and project areas of P2S. The list of filter categories includes:

- **Approvals:** Information to manage the approval processes.
- **Change Orders:** All of the change orders that have been applied to a contract.
- **Claims:** Information pertaining to contract claims.
- **Contract Management:** Name of the contractor, bonding agent, RCE and RME.
- **Contact Status:** Information regarding the status of key dates and monetary amounts.
- **Bid Items:** Bid items and prices of contract materials.
- **Funding/Work Phases:** Funding and Work phase information for projects.
- **General – Contracts:** High level summary information pertaining to the contract.
- **General – Projects:** High level summary information pertaining to the project.
- **Letting:** Information about the contract vendors and bid amounts.
- **Location:** The routes, structures and railroads affected by a contract or project.
- **Pay Items:** Project Pay Items used for letting.
- **PPMS:** Legacy PPMS data for projects initiated in PPMS and now maintained by P2S.
- **Remarks:** Comments about the project.

These categories roughly correspond to the tab names in the contract and project areas of P2S. In general, if a data field appears on the same-named tab, it will show up in the list of Item attributes when that filter is selected.

The System Administrator will have the power to customize the list of Filter Categories through editing the LUFilterCategory lookup table in Code List Maintenance. This lookup table will have only one value for the Administrator to enter – the Filter Category name (i.e. Estimates, General – Contracts, etc.). The system will generate a unique numeric code for the filter. The System Administrator can then use System Table Maintenance to assign a filter category to each column in the database. PMG will initially populate the filter category list and assign default values to each column.

The following mockup shows an example of the Advanced Report search interface after the user has added three search phrases:

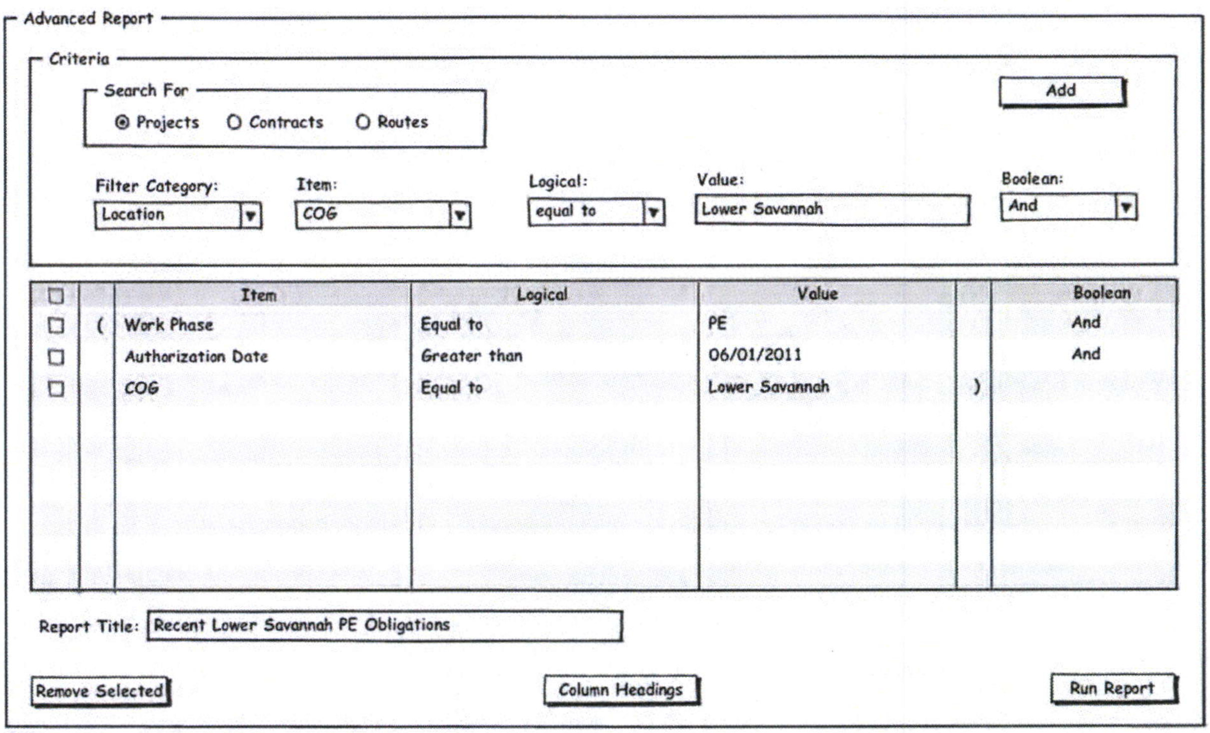


Figure 97 - Example of Advanced Report Search Criteria

The selections that were used to build the third search phrase are shown in the upper portion of the screen. All three search phrases are listed in the lower table. The user may check the box next to any of these phrases and select the **Remove Selected** button to remove it from the list.

The capability to build more complicated searches that require parenthesis will be provided in this interface. Each row will have a designated area to insert any number of opening parenthesis at the start of the search phrase row and closing parenthesis at the end of the search phrase row (right before the Boolean value). By default, the system will put one parenthesis before the first and after the last value, as shown in the mockup above. These default parentheses around the entire search string do not affect the search behavior. However, parenthesis inserted around middle search phrases will affect behavior by determining the order of search operation. The system will conduct the search for phrases inside the parenthesis first before searching for phrases that are outside the parenthesis. In this way, a search for contracts where (Work Phase = PE **and** Authorization Date > 06/01/2011 **and** (COG = Lower Savannah **or** COG = Upper Midlands)) could easily be constructed.

Once search criteria have been added to the table, the user may enter a Report Title in the box at the bottom the screen. If no title is entered, the system will default to "P2S Advanced Report." Then, the user may press the Column Headings button to tailor-make the output of the report, or may jump straight ahead to the Run Report button.

The following mockup shows the Column Headings interface as it would appear if the user clicks on it after entering the search criteria shown above:

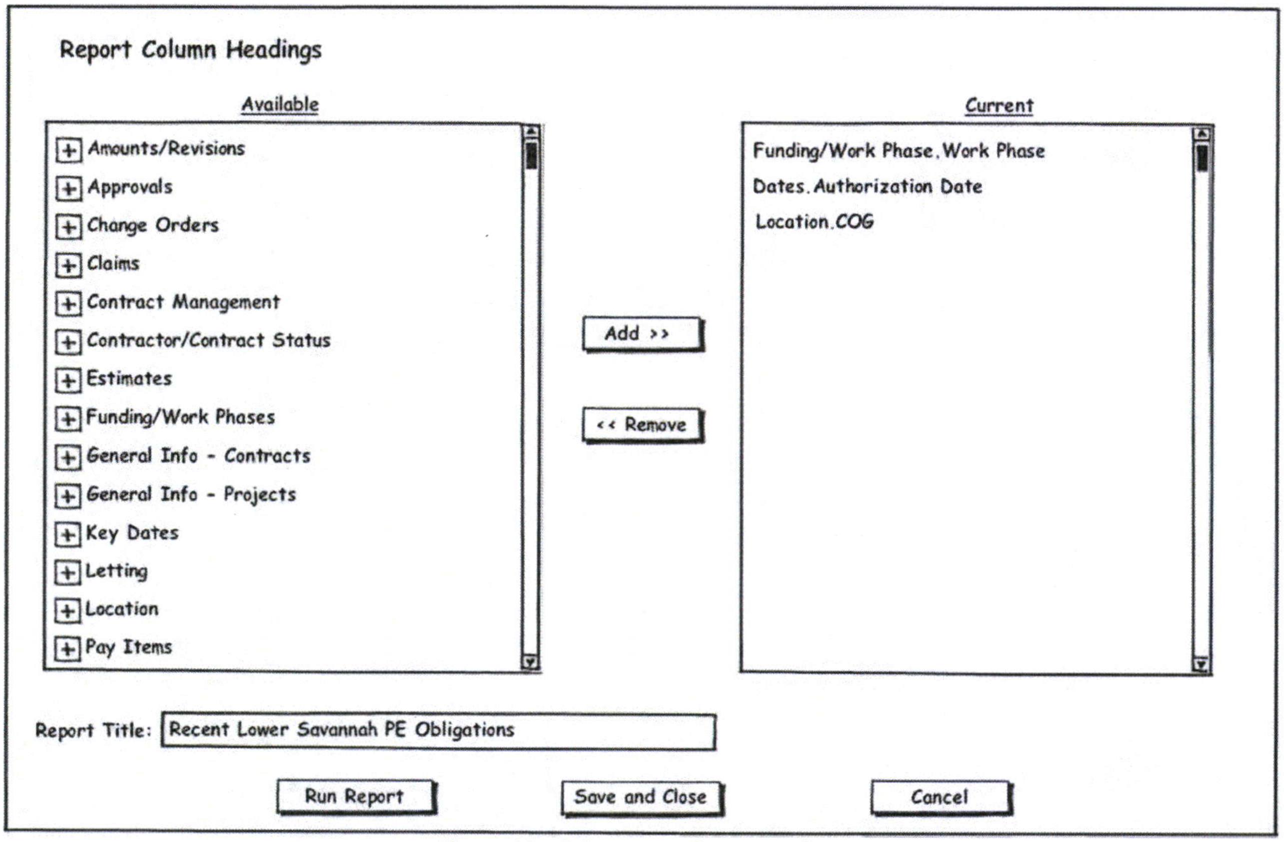


Figure 98 - Column Headings Interface

The left-side box holds a list of every available report data column, grouped by Filter Category. The right box holds a list of every column that is currently selected to be shown on the report. By default, all columns that the user queried on will be added to the current selections. (In this example, those were the Work Phase, Authorization Date and COG). The columns are listed in the format FilterCategory.ColumnName.

The following functions are available on the Column Heading screen:

Add – This button will add the selected item from the "Available" list to the "Current" list.

Remove – This button will remove the selected item from the "Current" list.

Report Title – The user may add or change the report title in this text box.

Run Report – This button generates the report with the selected columns from this window and search criteria from the Advanced Report interface.

Save and Close – This button will save the selected columns for this report and return the user to Advanced Report search criteria window.

Cancel – This button will return the user to Advanced Report search criteria window without making any changes to the selected columns or report title.

The user may expand a filter category to see the columns that can moved from Available to Current as shown below:

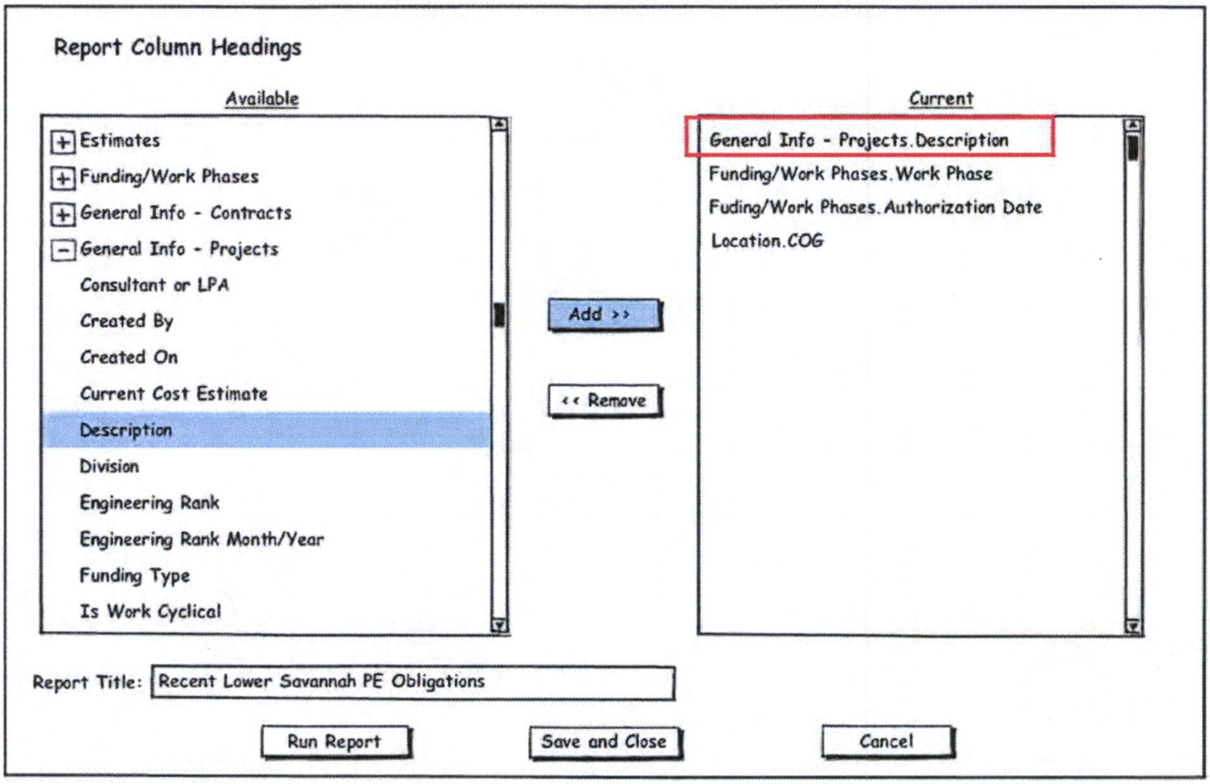


Figure 99 - Adding Column Headings

In this example, the user has decided to add the Project Description column to the report. If the user selects the **Run Report** button, an Advanced Report will pop up in a new window. The following mockup shows the report that would be generated based on the search criteria and selected columns shown in the above example:

South Carolina
Department of Transportation

Date: 06/16/11
Page: 1 of 1

RECENT LOWER SAVANNAH PE OBLIGATIONS

Search Criteria: Projects
Work Phase = PE And Authorization Date > 06/01/2011 And COG = Lower Savannah

Project Number	Project Description	Work Phase	Authorization Date	COG
0354780	Sidewalk Project in the City of Cameron	PE	06/02/2011	Lower Savannah
0577024	Landscaping & Irrigation in the City of N. Augusta	PE	06/07/2011	Lower Savannah
1997342	S-79 Bridge over Jarvis Creek	PE	06/10/2011	Lower Savannah

Print | Export | Map Projects | Run Location Conflict Report

Figure 100 - Advanced Search Results Report

The previously entered report title is shown at the top of the page. The entire search string that was used is shown above the report. All reports will list the ID number of each returned project or contract, followed by any of the database columns that the user selected on the Column Headings screen.

The hyperlinks on this screen include:

Print – This link will bring up the printer setup dialog, allowing the user to print the report.

Export – This link will allow the user to export the report to Excel 2010 or a comma separated text file.

Project/Contract Number – This link will open the project or contract's Summary Report in a separate window.

Map Projects – This link will display all of the projects in the report on the map.

Run Location Conflict Report – This link will use all of the projects in the table as input into a Location Conflict Report. The report will search for any overlapping projects based on project location.

Note: If the report is showing contracts, the map/location conflict report will be generated based on all of their associated projects.

2.7 Funds

P2S will provide the ability to view and in some cases, modify information regarding obligation limitations and apportionments. All users will have view capability. However, only users with OM Super User access will have the ability to add/modify specific data.

2.7.1 Obligations Limitation

The ability to view the obligation limitation for the current or past fiscal years is provided by the Funds → Obligations Limitation menu option as shown below:

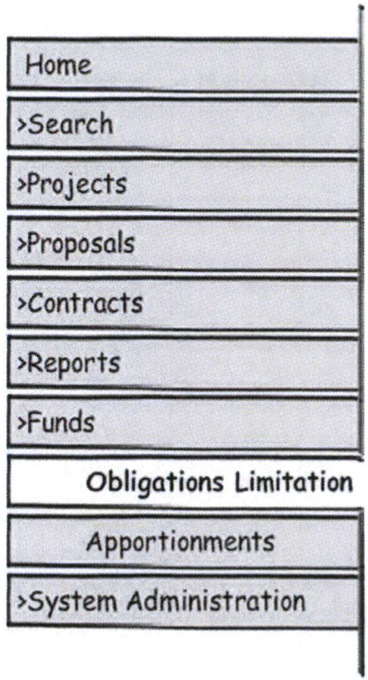


Figure 101 - Funds- Obligations Limitation Menu Item

When selected, the current fiscal year obligation limitation amount is shown. The following is a mockup of this interface:

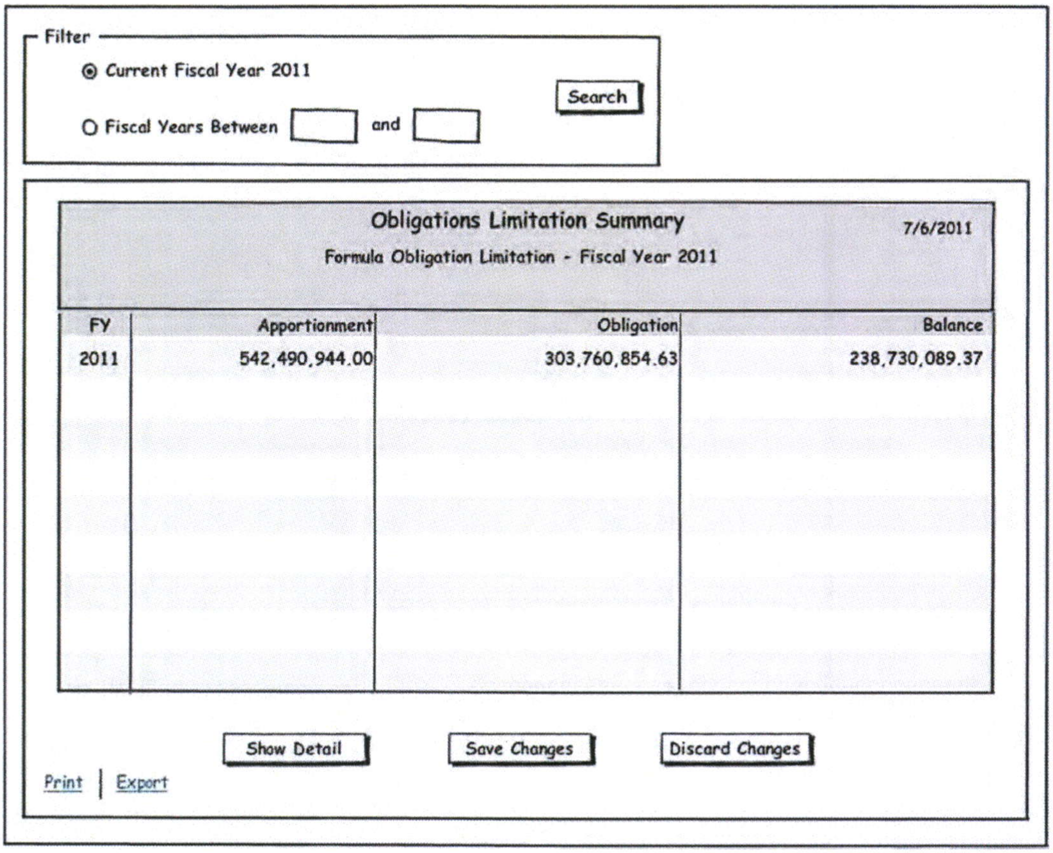


Figure 102 - Funds - Obligation Limitations Interface

Controls on this interface include:

Filter

Current Fiscal Year – When the window is displayed, by default the system will retrieve the information for the current fiscal year.

Fiscal Years Between – The user may optionally enter begin and end years to view data for multiple years.

Search Button – When selected, the report will refresh the data based on the selected filter.

Obligations Limitation Summary Report

This report will total all Work Phases/Funding transaction records where the Authorization date is within the given fiscal year *and* where the associated funding code has been delegated as a "subject to annual limitation." This designation is input by the System Administrator using Code List maintenance for "Fund Codes."

FY – Fiscal year of apportionment.

Apportionment – The federally allotted apportionment for the given fiscal year. If it is the first time that this interface has been run for the current fiscal year, then the apportionment amount will be empty.

This field is editable by OM Superusers for the current fiscal year. All other users will have view-only capability.

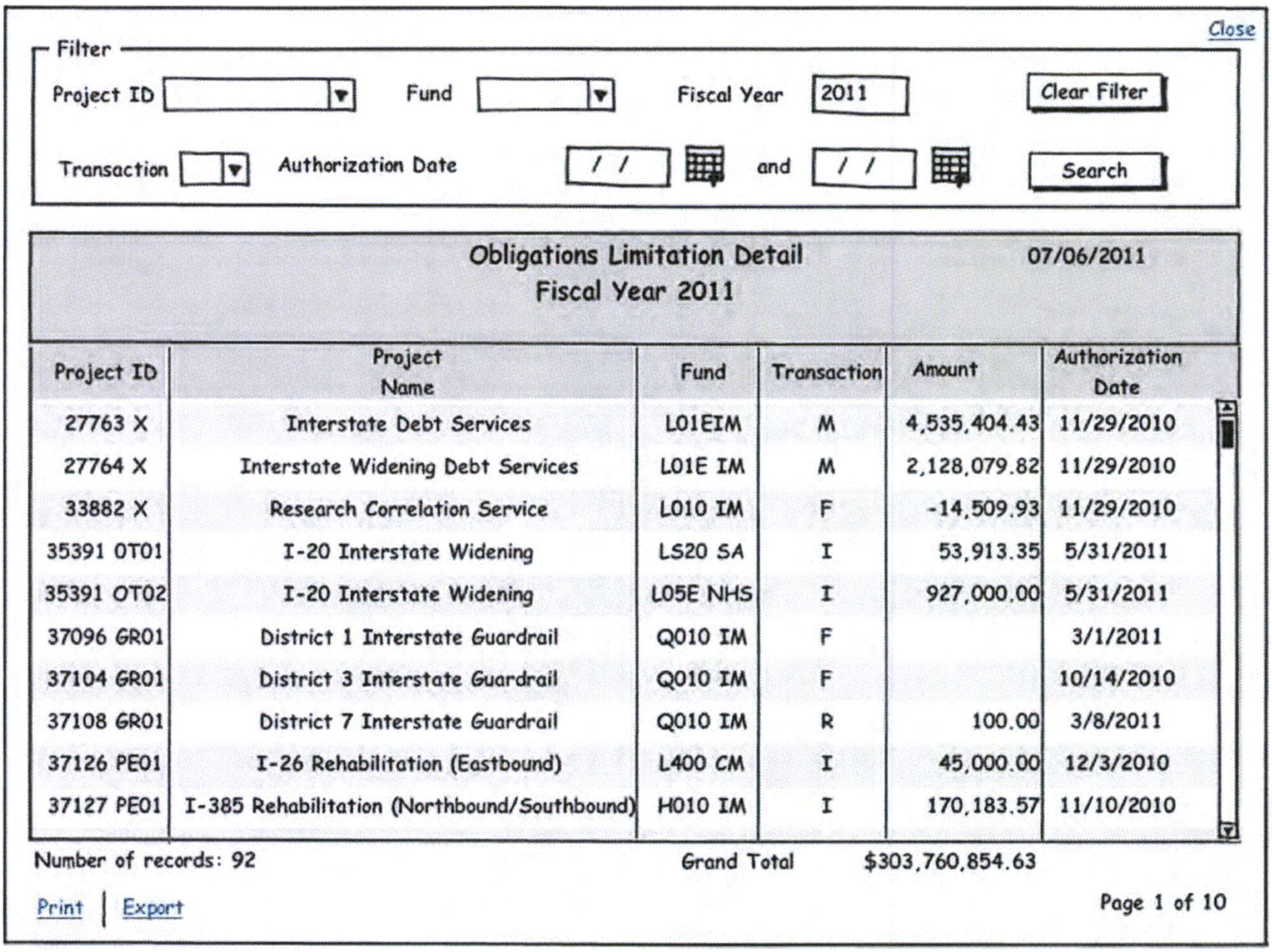
Obligation – The total of all authorized annual limitation funds for the given fiscal year (see above for full description).

Rescission – Funds that have been rescinded out of the DOT's contract authority, thus decreasing the unobligated balance. This field is editable by OM Superusers for the current fiscal year. All other users will have view-only capability.

Balance – Calculated as *Apportionment – (Obligation + Rescission).*

Show Details Button – When selected, the Obligations Limitation detail report is displayed for the currently selected row. If only one row is displayed, the report will display detailed Obligations Limitation results for that row. This report will individually list every transaction included in the *Obligation* column for the selected Obligation Limitation Summary record.

An example of this report is shown below:



Project ID	Project Name	Fund	Transaction	Amount	Authorization Date
27763 X	Interstate Debt Services	L01EIM	M	4,535,404.43	11/29/2010
27764 X	Interstate Widening Debt Services	L01E IM	M	2,128,079.82	11/29/2010
33882 X	Research Correlation Service	L010 IM	F	-14,509.93	11/29/2010
35391 OT01	I-20 Interstate Widening	LS20 SA	I	53,913.35	5/31/2011
35391 OT02	I-20 Interstate Widening	L05E NHS	I	927,000.00	5/31/2011
37096 GR01	District 1 Interstate Guardrail	Q010 IM	F		3/1/2011
37104 GR01	District 3 Interstate Guardrail	Q010 IM	F		10/14/2010
37108 GR01	District 7 Interstate Guardrail	Q010 IM	R	100.00	3/8/2011
37126 PE01	I-26 Rehabilitation (Eastbound)	L400 CM	I	45,000.00	12/3/2010
37127 PE01	I-385 Rehabilitation (Northbound/Southbound)	H010 IM	I	170,183.57	11/10/2010

Figure 103 - Obligations Limitation Detail Report

When initially displayed, the available Fiscal Year filter will default to the fiscal year from the selected (or only) row on the Obligations Limitation Summary window. Users will also have the ability to change the filter and create a new report. The ability to Print and Export the results will also be provided.

Save Changes Button - When selected, any change to the Apportionment or Rescission amounts will be saved. This button is only visible to OM Superusers.

Discard Changes Button - When selected, any change to the Apportionment or Rescission amounts will not be saved and those values will be returned to the values last saved. This button is only visible to OM Superusers.

Print – When selected, the user will be able to print the report to the desired print location.

Export – When selected, the user will be allowed to save the data in the report to the Excel format.

2.7.2 Apportionments

The ability to view apportionments for the current or past fiscal years is provided by the Funds → Apportionments menu option as shown below:

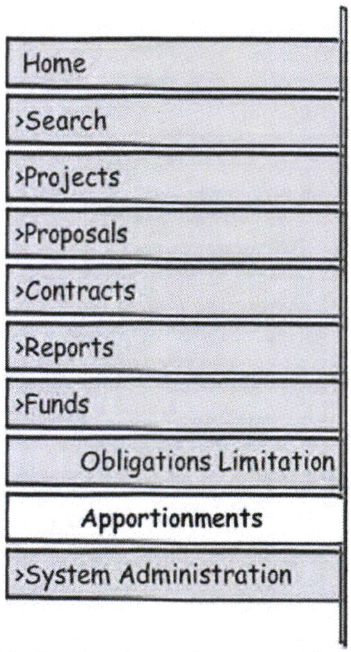


Figure 104 - Funds - Apportionments Menu Option

Following is a mockup of the Apportionment Summary interface:

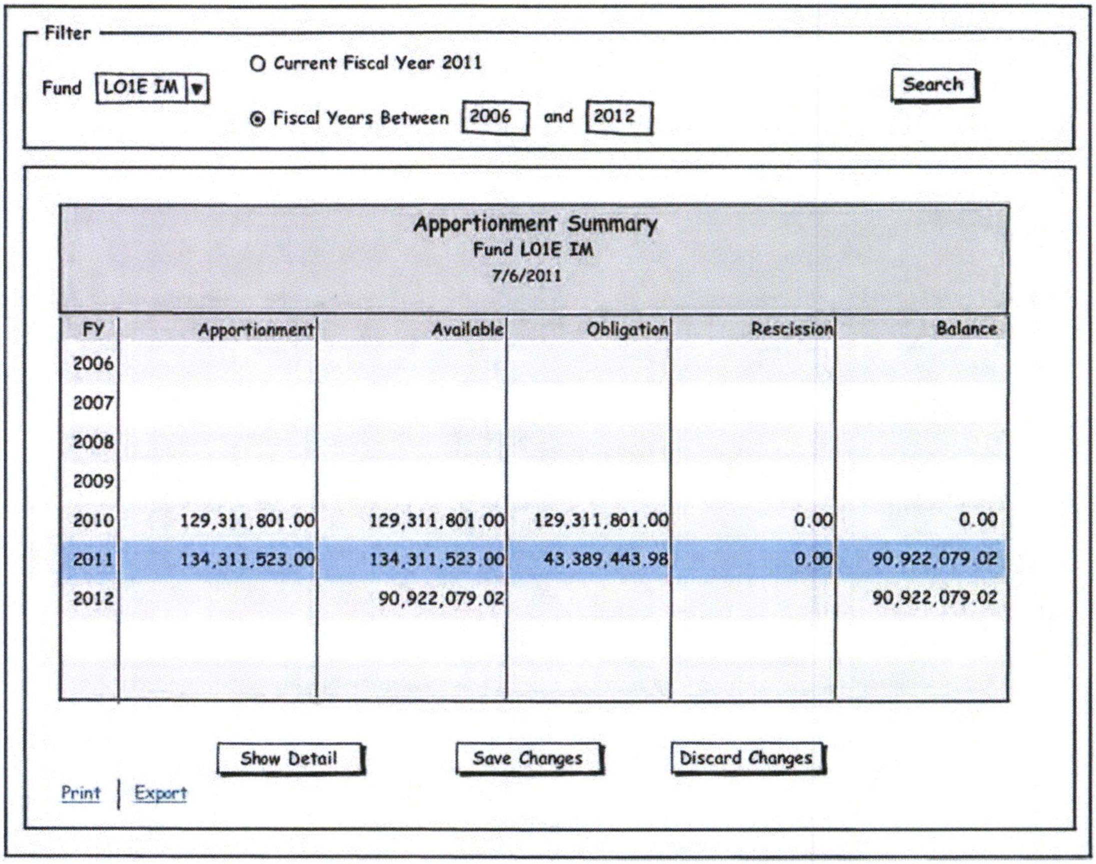


Figure 105 - Apportionment Summary Interface

Controls on this interface include:

Filter

Fund – The user is required to select a fund from the drop down list for which the report will be generated.

Current Fiscal Year – The user has the option to select the Current Fiscal Year for which to display the Apportionment summary. The actual current fiscal year (i.e. 2011) will also be displayed. This radio button is selected by default.

Fiscal Years Between – The user may optionally enter begin and end years to view data for multiple years.

Search Button – When selected, the report will refresh the data based on the selected filter.

Apportionment Summary Report

This report will total all Work Phases/Funding transaction records where the Authorization date is within the given fiscal year *and* where the associated funding code matches the filter criteria.

FY – Fiscal year

Apportionment – The allotted apportionment. This field is editable by OM Superusers for the current fiscal year. All other users will have view-only capability.

Available – The total of the apportionment plus any remaining balance from the previous fiscal year.

Obligation – The total of all authorized transactions for the given fiscal year having the fund code as designated by the filter.

Rescission – Funds that have been rescinded out of the DOT's contract authority, thus decreasing the unobligated balance. This field is editable by OM Superusers for the current fiscal year. All other users will have view-only capability.

Balance – Calculated as *Available – (Obligation + Rescission).*

Show Details Button – When selected, the Apportionment detail report is displayed for the currently selected row. If only one row is displayed, the report will display detailed Apportionment results for that row. This report will individually list every transaction included in the *Obligation* column for the selected Apportionment Summary record.

An example of this report is shown below:

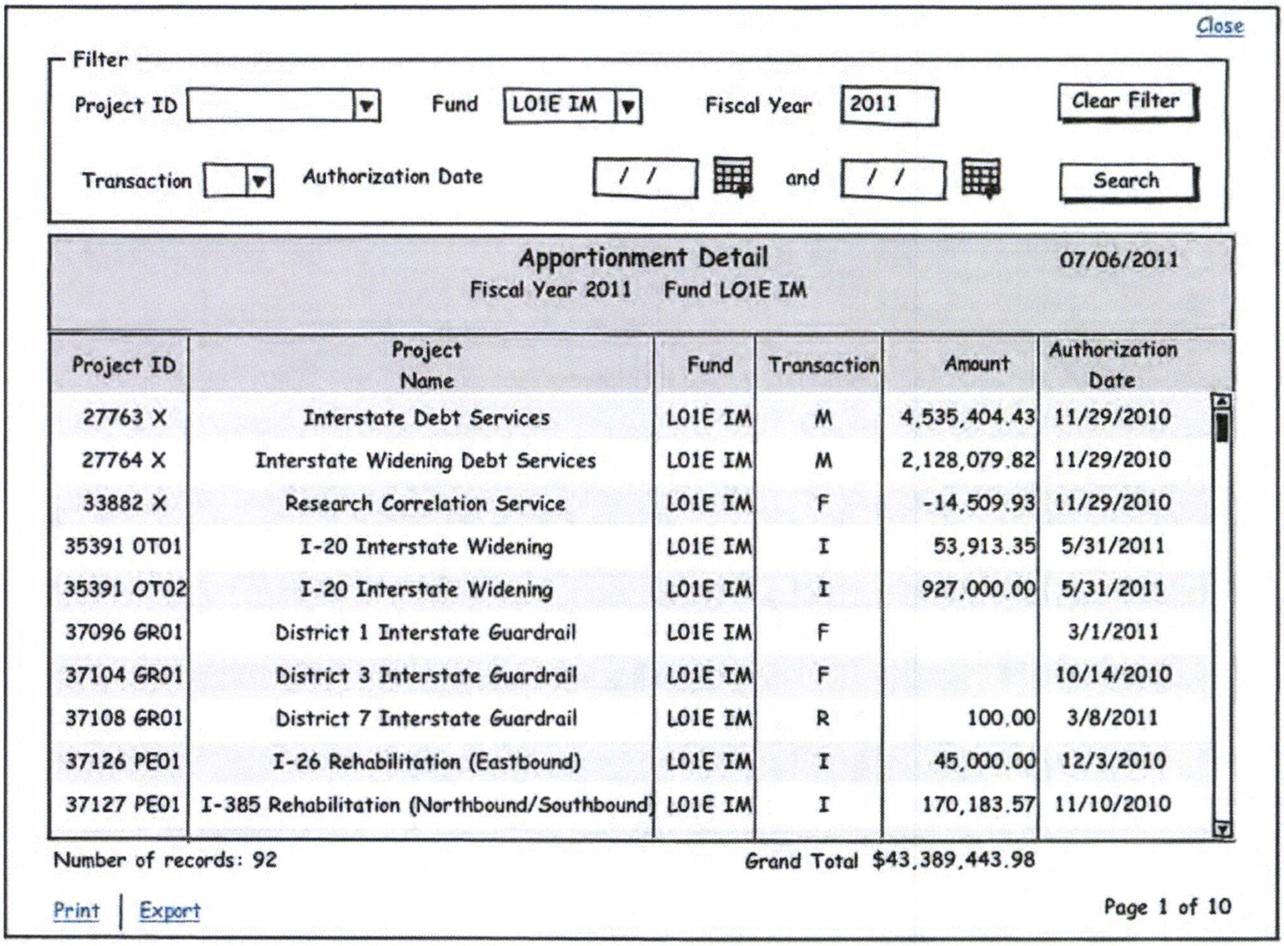


Figure 106 - Apportionment Detail Report

When initially displayed, the available Fiscal Year filter will default to the fiscal year from the selected (or only) row on the Apportionment Summary window. Users will also have the ability to change the filter and create a new report. The ability to Print and Export the results will also be provided.

Save Changes Button - When selected, any change to the Apportionment or Rescission amounts will be saved. This button is only visible to OM Superusers.

Discard Changes Button - When selected, any change to the Apportionment or Rescission amounts will not be saved and those values will be returned to the values last saved. This button is only visible to OM Superusers.

Print – When selected, the user will be able to print the report to the desired print location.

Export – When selected, the user will be allowed to save the data in the report to the Excel format.

2.8 System Administration

P2S will provide a System Administrator module to allow for the maintenance of sensitive and high level capabilities. System Administration capabilities will be available to only those with the appropriate security level. Examples of System Administrator functions include:

- User Maintenance
- Workflow Maintenance
- Code List Maintenance
- System Table Maintenance

A screenshot of the menu and sub-menus is shown below:

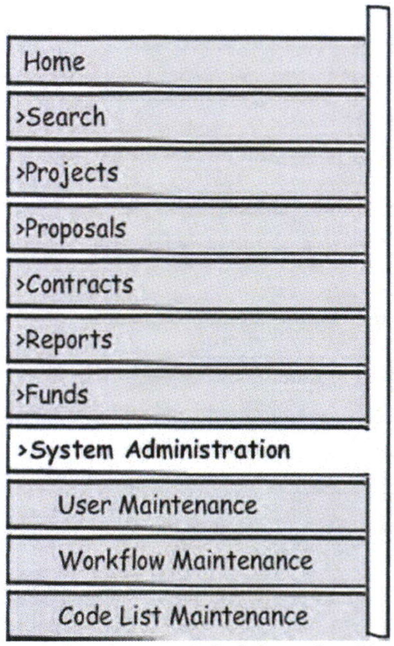


Figure 107 - System Administration Menu

Each of these interfaces will be described in detail in this section.

2.8.1 User Maintenance

P2S will provide the ability to create and modify users of the project programming system. A User Maintenance interface will be available from within the System Administration module to provide a System Administrator with this functionality. Several security permissions will be created which grant access for specific system capabilities and views. One or more of these permissions may be assigned to each user. Examples of these permissions are the ability to view the Official Engineer's Estimate, Plan a Project, Program a Project and Obligate Funding for a Project. It is not required that a user be entered into the User Maintenance module to access the project programming system. However, all users not found in this system will only have read access and will not have access to any functionality that has security permission such as the ability to view the official engineer's estimate.

The following shows an example of the User Maintenance interface:

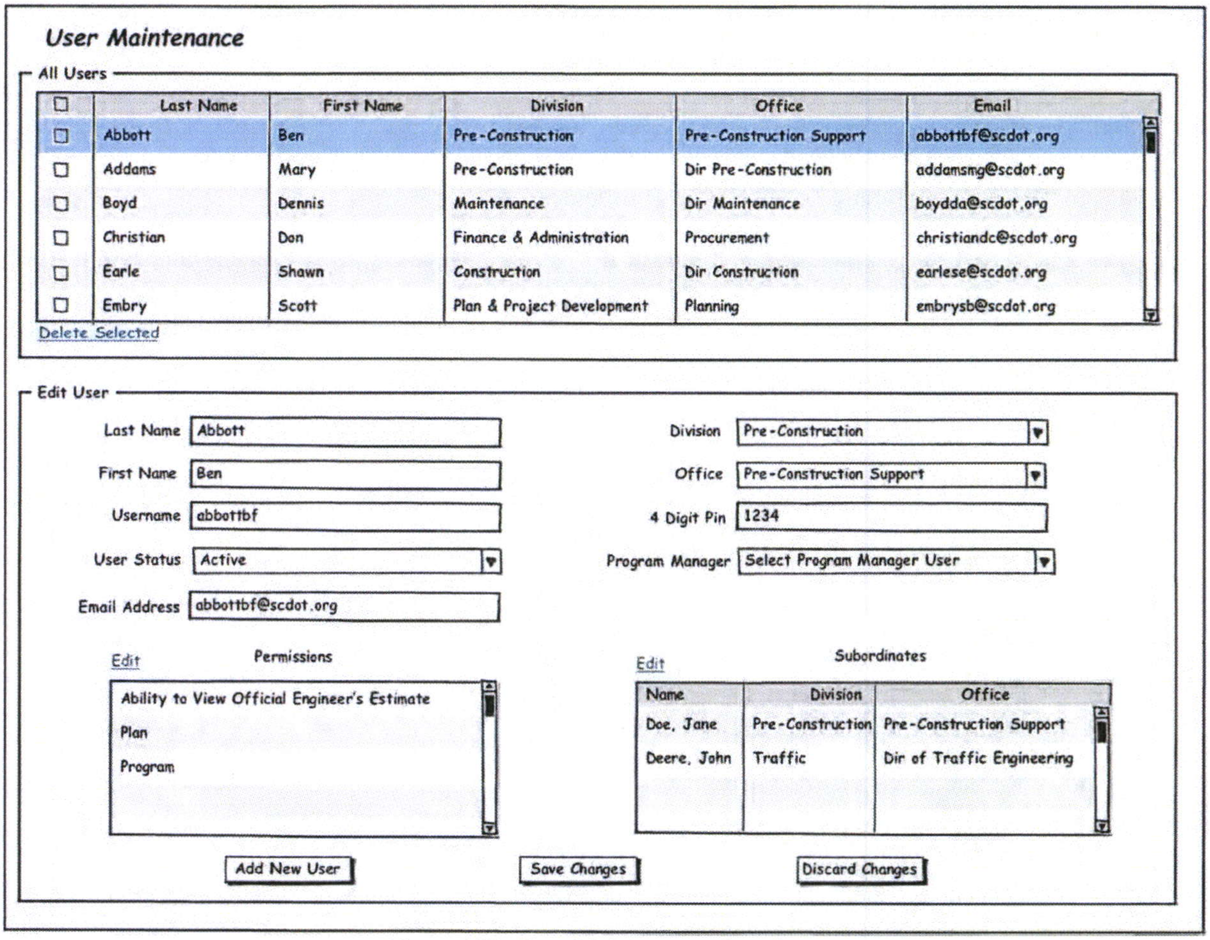


Figure 108 - User Maintenance Interface

The User Maintenance interface is divided into two sections.

- **All Users** - This table provides a read-only listing of all users currently defined in P2S. Values displayed for each user are Last Name, First Name, Division, Office and Email Address. A checkbox is provided to the left of each user entry to allow the System Administrator to delete one or more users from the system.
- **Edit User** - This area provides editable fields for all columns in the user table. The values shown in these fields will be automatically set each time a row is selected in the All Users table. These fields are also used to allow the System Administrator to add a new user to the project programming system.

The following defines the fields that are displayed for each user.

Delete Checkbox - Functionality is provided to allow one or more existing users to be removed from the project programming system. In order to delete a user, the System Administrator simply checks the checkbox to the left of the user's entry in the All Users table. Once all users to be removed have been checked, the "Delete Selected" link at the bottom of the table is selected. All identified users are removed from the system and the contents of the All Users table is updated to reflect the removed users. If the system is unable to remove a user because the user is referenced elsewhere in the system as a creator of a project, program manager, etc., then a prompt will be displayed stating that the user cannot be deleted and will instead be set to have an "Inactive" status. This is to insure that historical user information for projects is maintained.

Last Name – This is the last name of the user. This field is required.

First Name – This is the first name of the user. This field is required.

Username – This is the user name of the user. Since the project programming system does not have a login screen, this is the user name for the user's domain login account. The project programming system will match the current user name against this field in the Users table to determine the functionality available to the user. This field is required.

User Status – This is the status of the user. Status types are "Active" or "Inactive." If a user has an Inactive status, then the user's name will no longer be available from any user selection list. The permissions for this user will also be ignored by P2S. As such, the user will be treated as a "guest" of the system and receive view only access.

Email Address – This is the user's internal SCDOT email address. This email address will be used by the P2S Workflow process to send emails to users as defined in the Workflow Maintenance interface. This field is required.

Division – This is the division in which the user is located. This field will have an associated drop down list. This drop down list will be populated with all available divisions as defined in the LUDivision code list table. This field is required.

Office – This is the office in which the user is located. This field will have an associated drop down list. This drop down list will be populated with all available offices as defined in the LUOffice code list table. This field is required.

4 Digit Pin – This is the unique PIN value the user will use when specifying their approval during a step in the Approval Workflow process. This field is required for all users that may be part of an Approval Workflow process. This field will be encrypted in the database.

Program Manager – This is the P2S user who is the program manager for all projects planned or programmed by the current user. This field will have an associated drop down list. This list will be populated with all existing P2S users. The Program Manager selected may be the same as the current user.

Four buttons are located at the bottom of the User Maintenance interface:

- **Add New User** – This button allows a new user to be added to the project programming system. When this button is selected the fields in the Edit User entry area are cleared so that the new user may be defined in these fields.
- **Save Changes** – This button saves all changes of the current user to the database. After the save is complete.
- **Discard Changes** – This button discards any changes made to the user and resets the fields back to the original values since the last save.

2.8.1.1 *P2S User Update Utility*

In order to simplify the creation of users in P2S, a desktop application named the "P2S User Update Utility" will be provided that will retrieve all domain users from the SCDOT Active Directory. All attributes such as username, first name, last name, email, etc. that can be loaded into the P2S user table will be copied. Any attribute not found, such as PIN, will be left blank and it will be the responsibility of the P2S system administrator to input these fields, when necessary. After the initial run of the utility, subsequent runs will only create new users if they do not exists and will only update the attributes of existing users.

NOTE: The P2S User Update utility can be scheduled to be run on a machine at any interval desired. However, it must be set to run as a domain user that has read access to the Active Directory.

2.8.1.2 *Permissions*

The user maintenance area contains a list box displaying the list of permissions currently assigned to the user. To edit the list of permissions, the user will select the "Edit" hyperlink. When selected, the following screen will be displayed:

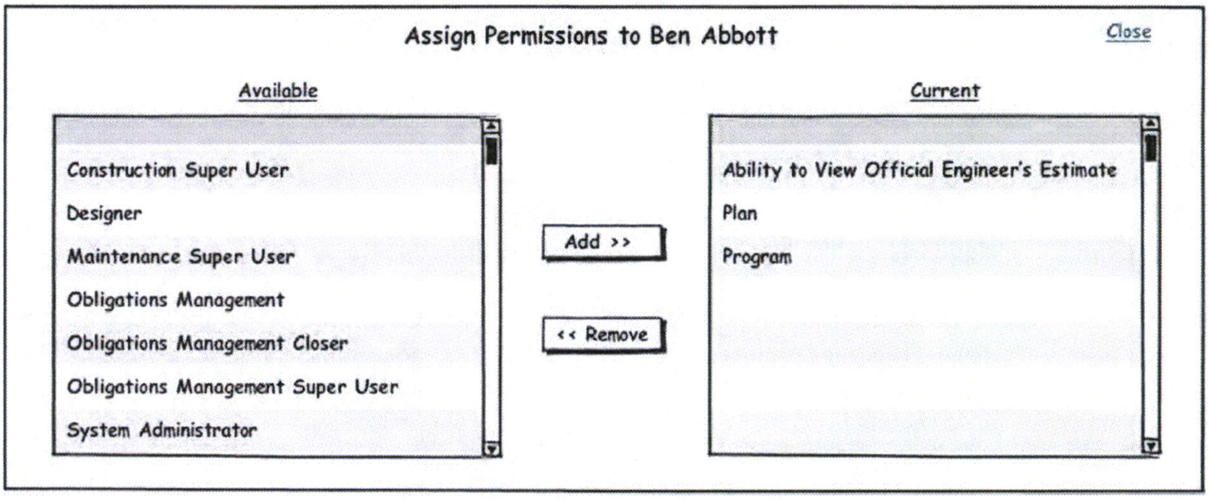


Figure 109 - Assign Permission Interface

From this screen, the administrator will be able to add and/or remove permissions for the current user. The *Available* area shows the list of permissions not yet given to the user but ones that are available. The *Current* area shows the list of permissions currently assigned to the user. The administrator may select a permission from either side and select the applicable *Add* or *Remove* button to change the assigned permissions.

Following is a list of the available P2S permissions.

Ability to View Official Engineer's Estimate – When assigned to a user, the user will be granted the ability to view the Official Engineer's Estimate.

Designer – When assigned to a user, the user will be granted the ability to create pay item categories and enter pay item information.

Contract Superuser – When assigned to a user, the user will have the ability to modify the editable fields on the Contracts tabbed interface.

Maintenance Superuser – When assigned to a user, the user will have the ability to run the Maintenance Routes report.

OM – When assigned to a user, the user will be granted the ability to change obligation status and enter authorization information for work phase funding sources.

OM Closure – When assigned to a user, the user will be granted all of the same permissions as OM but will also be able to add "Final" transactions to projects and change project status to Completed.

OM Super User – When assigned to a user, the user will be granted OM Superuser privileges. These privileges include being able to modify a work phase funding source and funding transactions when one or more obligation statuses are set to Authorized. This user will also have the ability to edit apportionment and limitation amounts for the current fiscal year.

Plan – When assigned to a user, the user will be granted the ability to plan a project.

Program – When assigned to a user, the user will be granted the ability to program a project.

Proposal Maintenance – When assigned to a user, the user will be granted the ability to create and manage proposals.

System Administrator – When assigned to a user, the user will be granted System Administrator privileges. These privileges include being able to access all functionality within the P2S System Administration module.

There are no **Save** or **Cancel** buttons on this window. To close the window, the user will select the *Close* hyperlink in the upper-right corner of the screen. Any permissions added or removed will be reflected in the User Maintenance window. From this window, the administrator will have the ability to Save or Discard all changes for the user, including the assigned permissions.

2.8.1.3 Subordinates

User Maintenance allows the administrator to assign "subordinates" to the current user. The purpose of assigning subordinates is so that projects may be edited by more than just the original creator or Program Manager of a project. As a subordinate, users with the appropriate permission will be able to modify any project originally created by the current user. The reverse case is also true: any project created by a subordinate may be edited by the current user with the appropriate permission. To edit the list of subordinates, the user will select the "Edit" hyperlink. When selected, the following screen will be displayed:

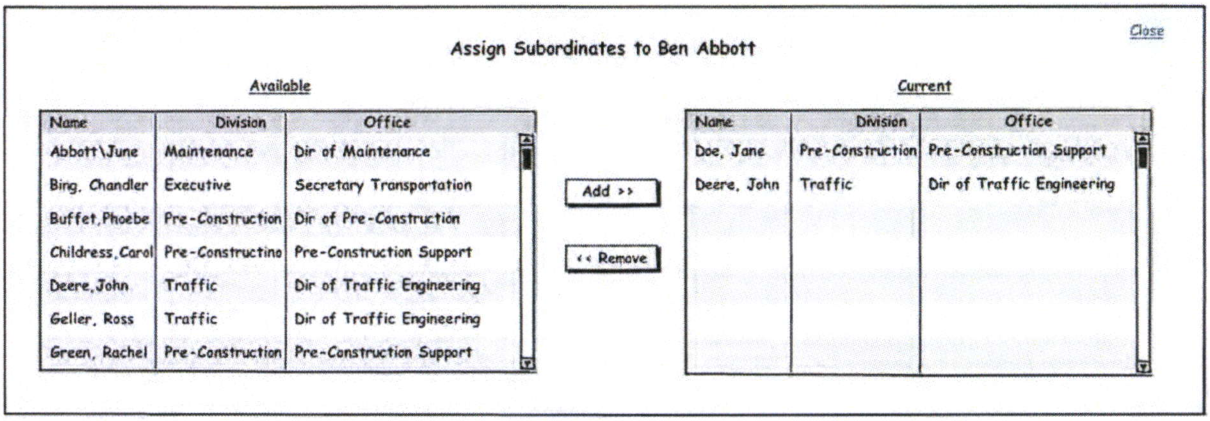


Figure 110 - Assign Subordinates - Edit Hyperlink

From this screen, the administrator will be able to add and/or remove subordinates for the current user. The *Available* area shows the list of all P2S users not assigned as subordinates to the user. The *Current* area shows the list of the users currently assigned as subordinates to the user. The administrator may select a subordinate from either side and select the applicable **Add** or **Remove** button to change the assigned subordinate.

There are no **Save** or **Cancel** buttons on this window. To close the window, the user will select the *Close* hyperlink in the upper-right corner of the screen. Any subordinates added or removed will be reflected in the User Maintenance window. From this window, the administrator will have the ability to Save or Discard all changes for the user, including the assigned subordinates.

2.8.2 Change PIN

All users will have the ability to modify their assigned 4-digit PIN value. If the current P2S user is defined in the Users table then there will be a "Change PIN" hyperlink in the upper-right corner of most P2S pages. When selected, a form will be displayed that allows the user to change their 4-digit PIN from its current value to a new value. The following is an example of this Change PIN form:

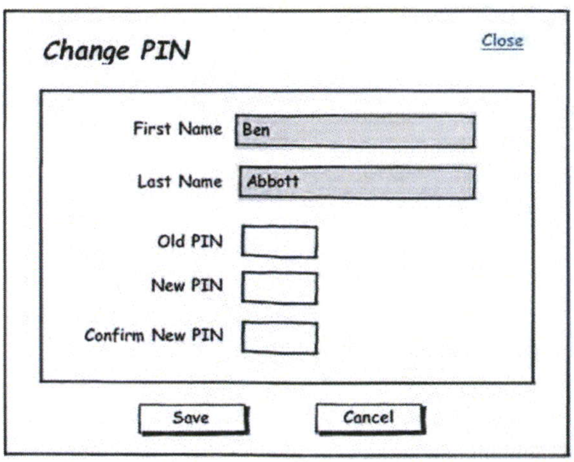


Figure 111 - Change PIN

The First Name and Last Name of the current user are displayed in read-only format on the form for user verification purposes. To change the PIN value, the user must first enter the Old PIN so that the system can confirm the identity of the user. Next, a new 4-digit PIN value should be entered into the New PIN field, followed by entering the same value into the Confirm New PIN field. If the value entered into the Confirm

New PIN field does not match the value entered into the New PIN field, the user will be prompted to re-enter the new PIN value in the Confirm New PIN field again. The new PIN value will be encrypted and saved to the database when the user selects the **Save** button. If the user wishes to discard the PIN changes, the **Cancel** button can be selected which will close the window without saving.

2.8.3 Workflow Maintenance

During the life of a project in P2S, many changes may occur that require approval by DOT personnel having direct or indirect responsibility for the project. Workflow Maintenance is a system administration function that manages the list of users receiving "requests for approvals" as discussed in section 2.3.2.8.1 of this document. The P2S process of what triggers the requirement for an approval and who gets the request is called a *workflow.* This section describes how to add users to a particular workflow and what changes constitute the need for an approval. Below is a mockup of the Workflow Maintenance screen after it has been selected from the System Administration → Workflow Maintenance menu:

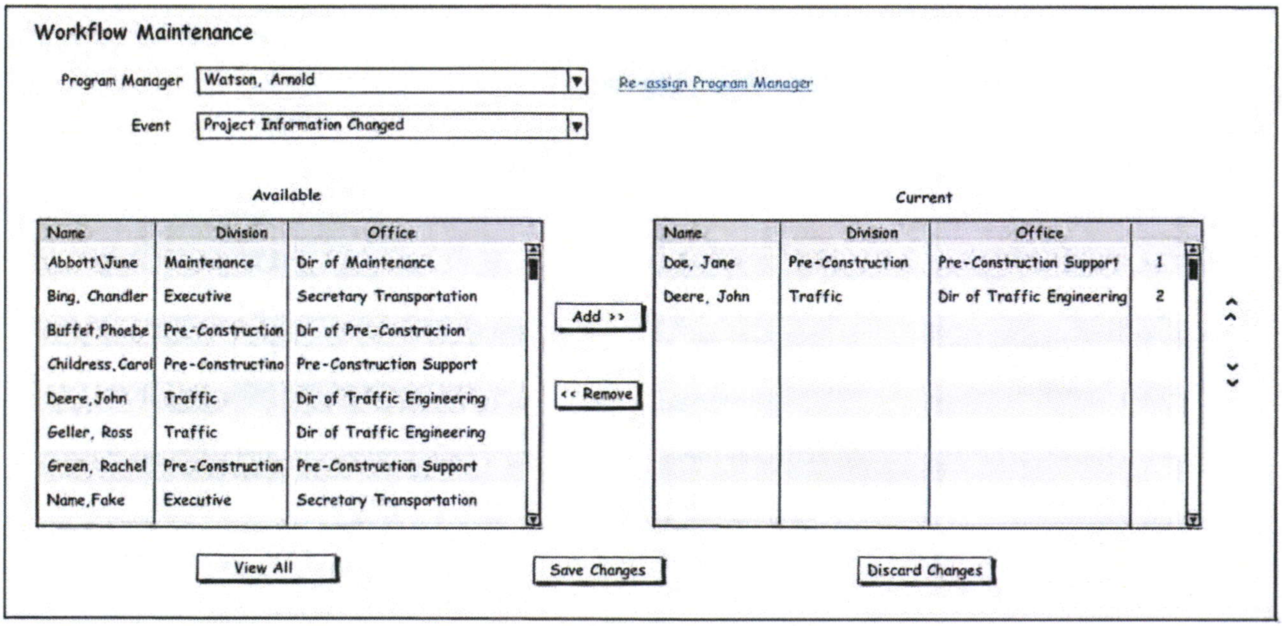


Figure 112 - System Administration - Workflow Menu

2.8.3.1 Workflow Maintenance Interface

A workflow is made up of a Program Manager, an Event and one or more P2S users. This section describes how each are used on the Workflow Maintenance interface, as well as some additional options.

- **Program Manager** – This list will be populated with all users who have been assigned as a Program Manager to one or more users. The user must first select a program manager from this list before proceeding.
- **Event** – The event lists logical names given for when one or more pre-determined project fields have been changed. The user must select a program manager *and* an event before a user can be assigned to a workflow. The event list is described in detail later in this section.
- **Re-assign Program Manager** - This option allows the user to re-assign a program manager. This option is described in detail later in this section.

- **Available** – This section of the interface displays all active users maintained by the P2S User Maintenance module. One or more users from this list may be added to the "Current" users for the selected program manager/event pair.
- **Current** – This section of the interface displays the names, divisions and offices of users that have been assigned to a program manager/event pair. For all events, with the exception of Notification, this interface also contains a number in the rightmost column which indicates the order in which the user should be in the workflow cycle.
- **Add >>** - This button will add the selected user or users from the Available list to the Current list.
- **<< Remove** – This button will remove the selected user or users from the Current list.

For all events, with the exception of Notification:

- ^ The up arrows will move the selected user in the Current list up one row thereby changing that user's position in the approval sequence.
- v The down arrows will move the selected user in the Current list down one row thereby changing that user's position in the approval sequence.
- **View All** – When selected, are report will be displayed listing all program manager, events and the assigned users. Below is an example of this report:

Close

P2S Workflows
7/11/2011

Program Manager	Event	User	Division	Office	Order
Dodson, Bob					
	Funds Requested for Obligation				
		Green, Rachel	Pre-Construction	Pre-Construction Support	1
		Geller, Ross	Traffic	Dir of Traffic Engineering	2
		Bing, Chandler	Executive	Secretary Transportation	3
	Notification				
		Beyer, Judy	Traffic	Traffic Engineer	
		Hughes, Jim	Safety	Safety Operator	
		Wallace, Wayne	Maintenance	Maintenance Inspection	
	Project Information Changed				
		Doe, Jane	Pre-Construction	Pre-Construction Support	1
		Deere, John	Traffic	Dir of Traffic Engineering	2
Gibson, Ladd					
	Funds Requested for Obligation				
		Green, Rachel	Pre-Construction	Pre-Construction Support	1
		Geller, Ross	Traffic	Dir of Traffic Engineering	2

Print | Export

Figure 113 - P2S Workflows Report

- **Save Changes** – This button saves all changes made.
- **Discard Changes** – This button discards all changes and sets values back to their state since the last save.

2.8.3.2 Workflow Events

As mentioned earlier, workflow events occur when one or more pre-determined project field has been changed. Each event is given a logical name and is described below.

Funds Requested for Obligation – This event is triggered when a new or an additional fund has been requested for obligation.

Proposed Let Date/Prop. Oblig. Date Changed FY – This event is triggered when the Proposed Let Date or the Proposed Obligation Date is changed to the next fiscal year. For example, if the previous Proposed Obligation Date for a fiscal year fund was changed from 6/2011 to 10/2011, then this event would be triggered (06/2011 is in fiscal year 2011 whereas 10/2011 is in fiscal year 2012).

Proposed Let Date/Prop. Oblig. Date Changed FY QTR – This event is triggered when the Proposed Let Date or the Proposed Obligation Date is changed to the next fiscal year quarter. For example, if the previous Proposed Obligation Date for a fiscal year fund was changed from 10/2011 to 01/2012, then this event would be triggered (10/2011 is in the first quarter of fiscal year 2012 whereas 01/2012 is in the 2nd quarter of fiscal year 2012).

Proposed Let Date/Prop. Oblig. Date Changed Within FY QTR - This event is triggered when the Proposed Let Date or the Proposed Obligation Date are changed within the same fiscal year quarter. For example, if the previous Proposed Obligation Date for a fiscal year fund was changed from 5/2011 to 6/2011, then this event would be triggered (5/2011 and 6/2011 are in the same quarter of fiscal year 2011).

Notification – This event is triggered when the user selects the "Notify" link. This event is not dependent on a change to a project field. This is also the only event that does not require approval. The users assigned to the Notify event will simply be notified.

Phases Added/Removed – This event is triggered when a work phase is added or removed from the project.

Project Creation – This event is triggered when a new project is saved for the first time.

Project Information Changed – This event is triggered when any of the following fields change for a project:

- Project Name
- STIP Item
- Project Type
- Funding Type
- Location (road, bridge or railroad crossing)
- Project Status

2.8.3.3 Re-assigning a Program Manager

Re-assigning the program manager may be necessary when a person either leaves the DOT or changes departments. When a program manager is re-assigned, all users and active projects having the previous program manager will now be assigned to the new program manager. All workflows will also be transferred from the previous program manager to the new. To re-assign a program manager, select the desired program manager from the list. Then select the "Re-assign Program Manager" link. The following window will be displayed:

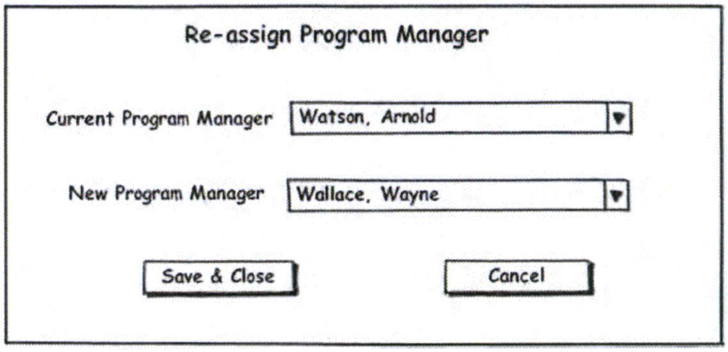


Figure 114 - Re-assign Program Manager Window

From here, the user will select from the "New Program Manager" list the person replacing the current program manager. The New Program Manager list will contain all active P2S users. Once the new program manager has been selected, the **Save & Close** button will be selected. A confirmation box will display, giving the user a 2nd chance to verify that they intend to re-assign the program manager. An example of this message is shown below.

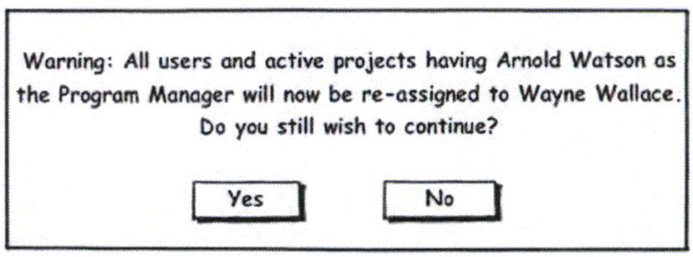


Figure 115 - New Program Manager Confirmation Box

If the user selects "Yes," the program manager will be re-assigned and the user will be returned to the Workflow maintenance interface. If "No" is selected, the program manager will not be re-assigned and the user will be returned to the Re-assign Program Manager interface.

2.8.4 Code List Maintenance

A Code List Maintenance interface will be available from within the System Administrator module of P2S. This interface will provide a system administrator user with the ability to maintain all P2S code lists. A code list is a set of items that have at least two pieces of information: a description and a database "code" that is associated with the description. The purpose of a code list is so that users can be presented with a descriptive text instead of the short database code that is stored in the database table. For example, a "county" code list would allow the user to select Richland from a pick-list instead of the code "40." The following shows an example of the Code List Maintenance interface for the County code list.

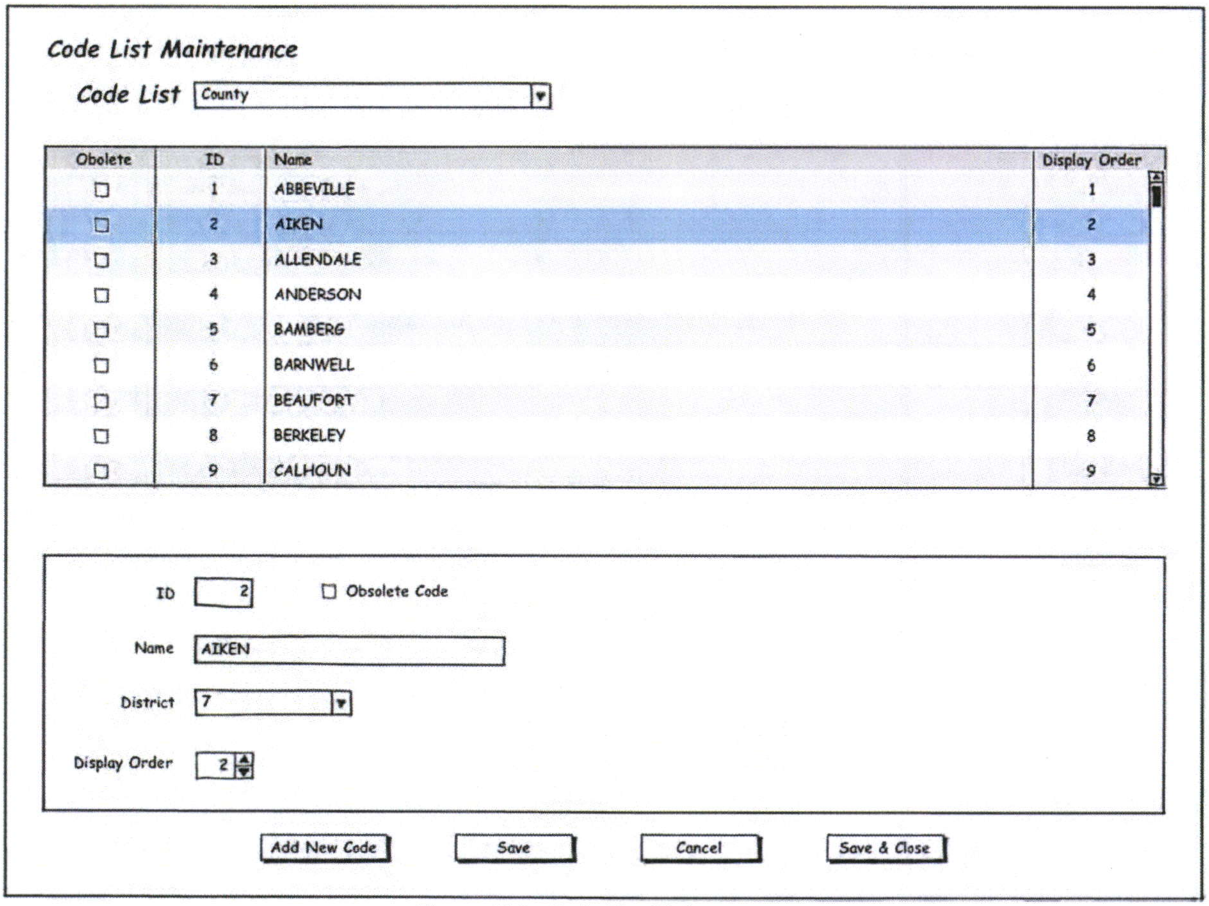


Figure 116 - Code List Maintenance

The Code List Maintenance interface is divided into the following three sections:

- **Code List selection dropdown list** - This dropdown list contains all available code lists, as defined in the P2SCodeList table.
- **Code List entries region** - This region provides a read-only listing of all entries currently defined in the selected code list. Regardless of the code list selected, this table will always display the four columns shown. This region is automatically populated each time a code list is selected from the code list selection dropdown list.
- **Code List entry area** - This area provides editable fields for all columns in the selected code list. These fields are also used to allow a user to add a new code list entry. The Code List entry area may change based on the code list selected. For example, when the County code list is selected, the District field is also shown in the Code List entry area so that the user can associate the correct district to the selected county.

Four buttons are located at the bottom of the interface and are as follows:

- **Add New Code** –This button allows the user to add a new code list entry to the current code list. When this button is selected the fields in the Code List entry area are cleared so that the user may define the new code list entry using these fields.

- **Save** – This button saves all changes to the code list to the database. After the save is complete the user remains in the Code List Maintenance interface.
- **Cancel** – This button closes the Code List Maintenance interface without saving any changes made by the user.
- **Save & Close** – This button save all changes to the current code list to the database. After the save is complete the Code List Maintenance interface is closed.

The following defines the four standard fields that are displayed for each code list in the Code List entry area:

- **ID** – This field defines the unique code associated with a code list entry.
- **Name** – This field defines the textual description for a code.
- **Display Order** – This field defines the order in which each code appears in all drop-down lists. If the display order is not given, the system will default to showing the code descriptions in alphabetical order.
- **Obsolete Code** – This field is used to denote if the code is obsolete and therefore is no longer allowed to be used in the system. When checked, the code is marked as obsolete.
- **Additional Fields** – In addition to these four standard code fields, some code lists may also include additional fields. For example, as shown in the prior Code List Maintenance figure, the County table also includes a District field which is used to denote the Engineering District for the County. In cases where a code list contains more than the standard four columns the additional column(s) will be included in the Code List entry area.

2.8.5 System Table Maintenance

Within the P2S database there are two system tables, P2STable and P2SColumn, whose purpose is to maintain information related to all of the tables and their associated columns within the P2S database. Examples of the type of information kept in these two tables include table description, column description and information about the column's associated code list, if applicable. In order to provide the system administrator with the ability to select how a code list is displayed to the users of P2S, as well as the ability to provide descriptions of each table and column, a System Table Maintenance interface will be available from within the System Administrator. The following shows an example of the System Table Maintenance interface.

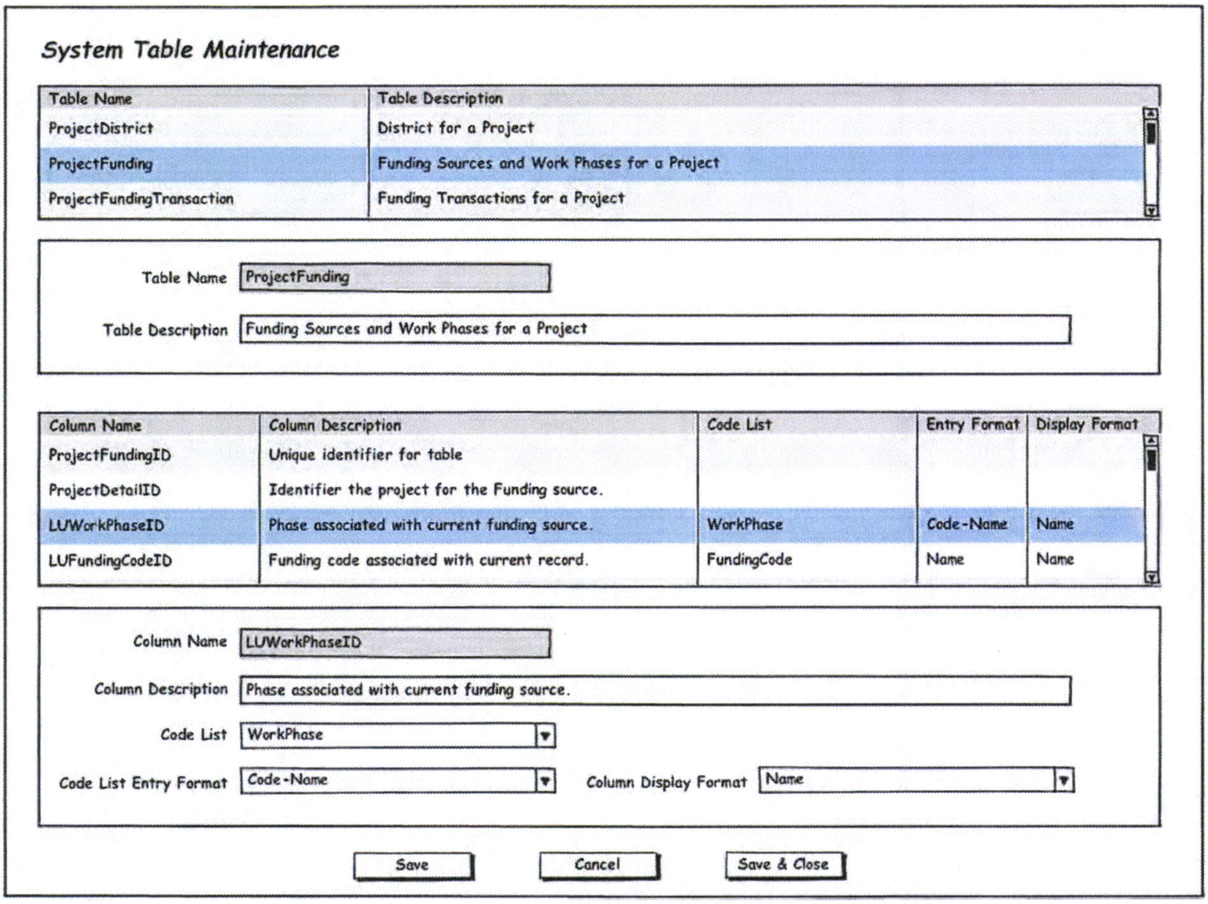


Figure 117 - System Table Maintenance

The System Table Maintenance interface is divided into four sections:

- **System Table List** - This table provides a read-only listing of all P2S tables, as currently defined in the P2STable table.
- **System Table Description Area** - This area provides the name and description of the selected table in the System Table List. The values shown in these fields will be automatically set each time a table row is selected in the System Table List.
- **System Table Column List** - This table provides a read-only listing of all columns for the selected system table, as currently defined in the P2SColumn table. The contents of this table are automatically set each time a table row is selected in the System Table List.
- **System Table Column Edit Area** - This area provides editable fields for the selected table column in the System Table Column List. The values shown in these fields will be automatically set each time a row is selected in the System Table Column List.

The following defines the fields in the System Table Edit Area:

- **Table Name** – This field defines the name of the table. This field may not be edited by the user.

- **Table Description** – This field defines the textual description for the table. This field is editable and will be used for system administrator reference purposes only.

The following defines the fields in the System Table Column Edit Area:

- **Column Name** – This field defines the name of the column. This field may not be edited by the user.
- **Column Description** – This field defines the textual description for the column. This field is editable and will be used for system administrator reference purposes only.
- **Code List** – This field defines the name of the code list associated with the column, if applicable. The associated drop down list will contain the name of all available code lists in the P2S system.
- **Code List Entry Format** – This field defines the format to use when displaying the contents of the specified code list in the drop down list associated with the column. Available formats are: Code, Name, Code-Name. This field will only be editable if the column has an associated code list.
- **Column Display Format** – This field defines the format to use then displaying a *selected* code list entry in a data field. Available formats are: Code, Name, Code-Name. This field will only be editable if the column has an associated code list.

As an example of the code list format choices, given the County code list is associated with a data field then if the Code List Entry Format is set to "Code-Name" then the *contents* of the drop down list would include entries: "1 – Abbeville", "2 - Aiken", "3 – Allendale", etc. If the Column Display Format is set to "Name" then if the user selects "2 – Aiken" from the drop down list, the value displayed in the data field would be "Aiken."

Three buttons are located at the bottom of the interface:

- **Save** – This button saves all changes made to both the system table and system column data to the database. After the save is complete the user remains in the System Table Maintenance interface.
- **Cancel** – This button closes the System Table Maintenance interface without saving any changes made by the user.
- **Save & Close** – This button save all changes to the system table and system column data to the database. After the save is complete the System Table Maintenance interface is closed.

3. Architecture

The P2S architecture is designed to provide optimal balance between performance, flexibility and scalability. P2S, being a young application, must meet adequate performance standards while maintaining an environment that allows for change and growth which is sure to present itself. The P2S architecture approach encourages integration over warehousing, and strives to access information where it is created and maintained as opposed to gathering all data and housing it together in one place. This enterprise integration approach was born in ITMS years ago, and it is under this ITMS umbrella that P2S finds its place. P2S will make use of several existing ITMS components as well as the ITMS application itself. This will enable P2S to retrieve and edit information throughout the SCDOT enterprise.

3.1 Dataflow Architecture

The diagram below shows the relationship of P2S to its integration points along with anticipated methods for data transfer:

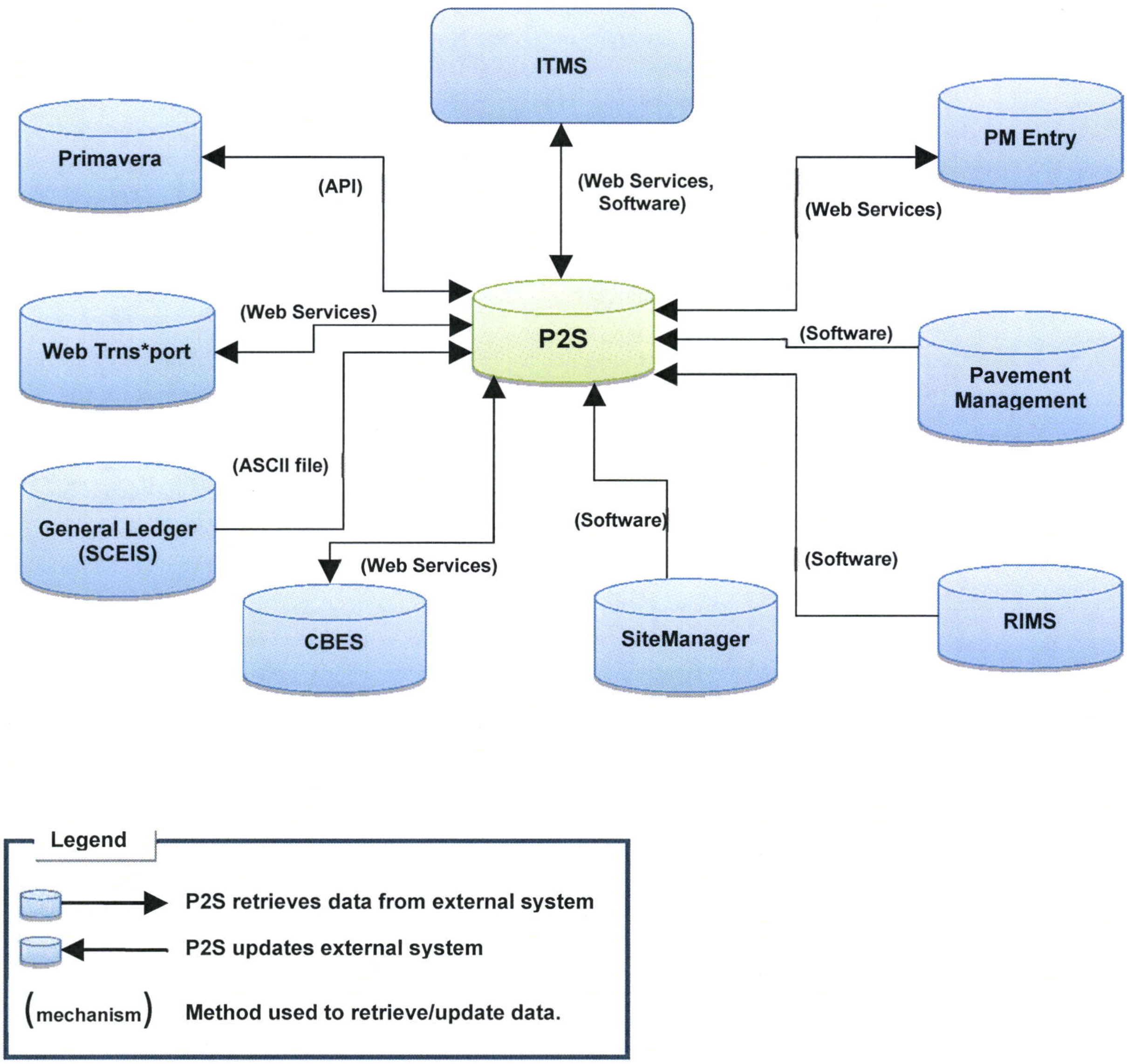


Figure 118 - P2S Dataflow Architecture

3.2 System architecture

3.2.1 Overview

The P2S application uses a layered approach to its architecture allowing for scalability. Application architecture is often described in terms of logical layers. It is important to remember that these layers are simply a convenient way to describe various functionality components of the application. They are conceptual divisions rather than a physical deployment pattern. The deployment of physical application layers is driven by their interaction with each other and the distinctive requirements they possess in terms of security, operations, and communication. The main benefits of layering produce a more scalable, flexible application, and provide a foundation for organized enterprise application development, maintenance, and deployment.

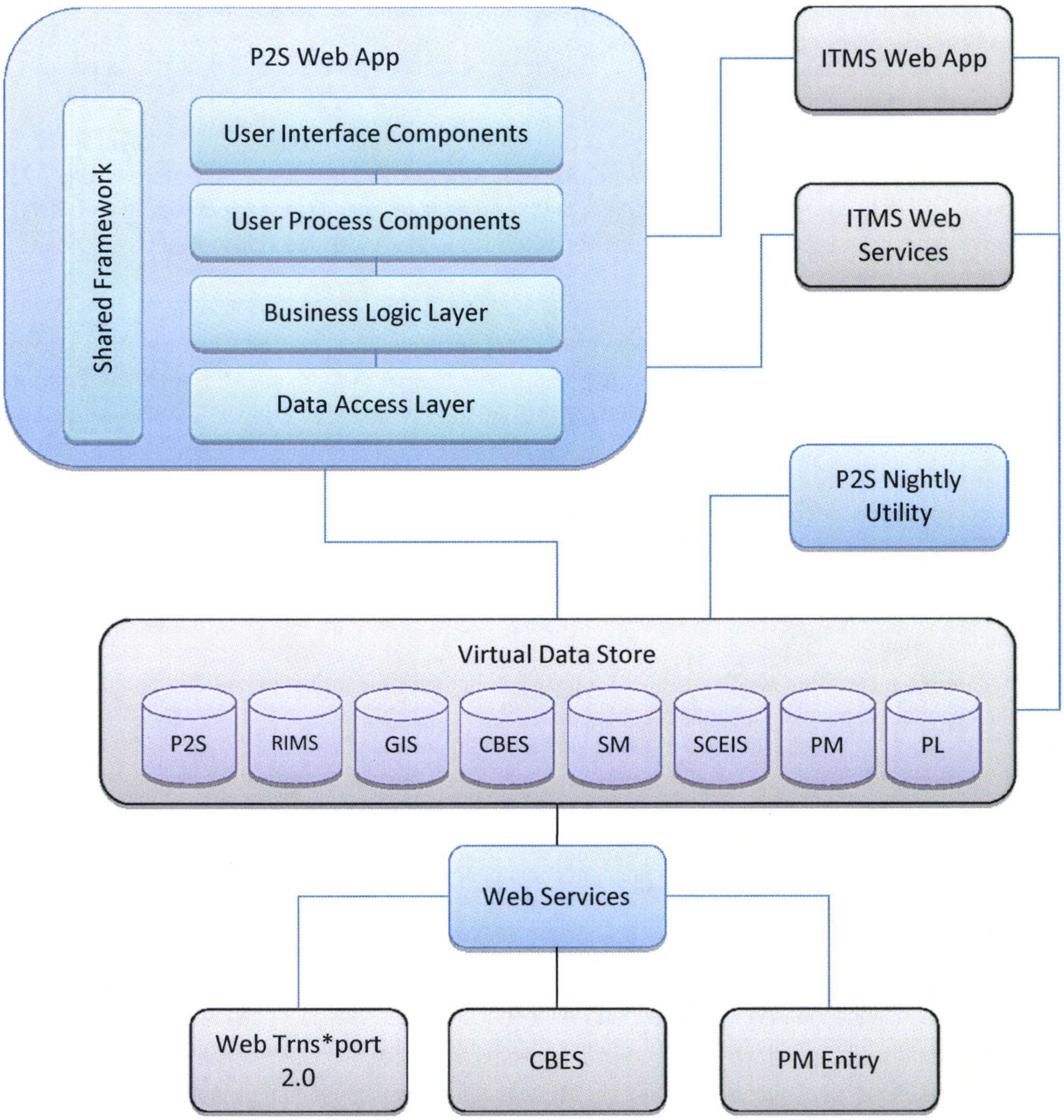


Figure 119 - P2S Workflow

3.2.2 User Interface Components

The main functionality provided by the User Interface Components is accepting user input, rendering data, and formatting values appropriately for display. P2S will utilize dynamically generated HTML elements and use Cascading Style Sheets (CSS) to render the interface.

3.2.3 User Process Components

The main functionality provided by User Process Components is to combine user Interface elements into interaction flows, track user interaction state, and maintain internal business states. P2S will utilize Asynchronous JavaScript (AJAX) to retrieve data and provide a smooth user interaction.

The user process components will be deployed in a .NET class that is separate from the user interface logic to facilitate reuse and easy maintenance.

3.2.4 Business Logic Layer

The Business logic layer is invoked by User Process Components or Service Interfaces. This layer is the root of transactions, validates input and output, and orchestrates business components to complete work. P2S will retrieve data from the database using .Net DataSets and convert it to JavaScript Object Notation (JSON) which will then be consumed by the User Process components to create the Interface Components.

3.2.5 Data Access Layer

The DALC layer contains SQL specific code. This layer mainly performs loading, updating, deletion and insertion (CRUD) of data. This layer is a single location for logging, performance monitoring and database connections. P2S will use the native database driver for optimal performance whenever possible.

3.2.6 Shared Framework

The shared framework provides a location for sharing entity definitions as well as utility functionality across layers in the P2S application without having to deal with circular referencing. This shared framework will often be re-used from application to application.

3.2.7 ITMS Web App

The existing ITMS web application will be enhanced to use specific information from P2S regarding projects. The ITMS application will also serve as a display and analysis tool for P2S.

3.2.8 ITMS Web Services

Existing web services will be used and enhanced in some cases to provide additional functionality as required by P2S. The main responsibility of this layer is to provide access to various information sources including GIS enabled data. This layer will provide services that perform spatial analysis of this data.

3.2.9 P2S Nightly Utility

In some cases, P2S will retrieve information from other data sources and house this information in its database. The P2S Nightly Utility is a desktop application that will retrieve data from various databases and populate the P2S database accordingly. Examples of data that will be retrieved from the nightly process include Award Dates and Actual Letting Dates from SiteManager, as well as expenditure information from the "General Ledger" (imported from the Projects in Process file). Primavera will also be queried to return Environmental document information for each project. It is recommended that this utility be run nightly but can be scheduled to be run as needed by SCDOT staff.

3.2.10 P2S Web services

P2S will make use of web services to facilitate the transfer of information between systems. It is anticipated that most of the web services necessary for P2S will reside as part of the P2S application, but the potential to use web services created by integration point applications exists. An example is Web Trns*port. It is anticipated that Web Trns*port will contain a new web service to allow P2S to insert Proposal, Project and Pay Item information into the Web Trns*port database. The P2S Web Service will facilitate the transfer of information between P2S and external applications, such as ITMS, CBES, PMEntry and Web Trns*port.

3.2.11 Virtual Data Store

The virtual data store facilitates access to all data sources and integration points of P2S. They are arranged into SQL Server and Oracle Groups and are stored across several virtual machines.

4. Database Migration and System Integration

4.1 PPMS Data Migration

The P2S database will be stored in SQL Server 2008. Details of the database structure are described in the document "ITMS TO8 - P2S Database Design.docx" previously provided to SCDOT. So that P2S will continue to provide maintenance and viewing capability to projects created prior to the development of P2S, data from the current project programming system, PPMS, will be migrated into the new P2S database.

The "live" PPMS data is stored in a mainframe database. However, for ease of reference by other applications SCDOT has created a SQL Server database version of the PPMS database into which the latest PPMS data is routinely copied. P2S will migrate the PPMS data from this SQL Server database. It will be the responsibility of SCDOT to insure that all necessary PPMS tables containing the latest data be available from the PPMS SQL Server database prior to the P2S data migration.

It will be the responsibility of the DOT to modify any PPMS data that does not meet the approved P2S database design. For example, it is often the case during large database migrations that some records are required to be modified to meet the constraints of the target database. It is anticipated that this may be the case during this migration effort.

4.1.1 Pseudo-code for Migrating PPMS Projects into P2S Projects

The current PPMS database is *Work Phase* driven, whereas P2S will be *Project* driven. PPMS uses PCN and Suffix to identify a project, however P2S will assign one identifier – Project ID. In order to migrate the PPMS PCN/Suffix data into the new P2S database, the following set of rules will be used to copy a PPMS project into the P2S database while still maintaining the existing relationships.

1. Query PPMS ProjectDefinition table for all PCNs that do not have an entry in the ProjectRelationship table.

```
select * from ProjectDefinition
where
ProjectPcn not in (select SubordinatePcn from ProjectRelationship union select
SuperiorPcn from ProjectRelationship)
```

   a. Insert each distinct ProjectPcn as a new ProjectId into the P2S ProjectDetail table.
   b. Insert an entry for each PCN/suffix pair into the P2S LegacyProjectDetail table.
   c. Insert an entry for each PCN/suffix pair into the P2S ProjectWorkPhase table.

2. Query PPMS ProjectDefinition table and retrieve each unique SuperiorPCN/Superior Suffix pairs that *are not* also a SubordinatePCN/SubordinateSuffix in the ProjectRelationship table.

```
select * from ProjectDefinition where
        (CAST( [ProjectPcn] as varchar) + ProjectSuffix) in (
                SELECT distinct CAST( [SuperiorPcn] as varchar) + SuperiorSuffix
                FROM ProjectRelationship
                where (CAST( [SuperiorPcn] as varchar) + SuperiorSuffix) not in
                (select CAST( SubordinatePcn as varchar) + SubordinateSuffix from
                ProjectRelationship)
        )
and ProjectPcn in (select SubordinatePcn from ProjectRelationship union select
SuperiorPcn from ProjectRelationship)
```

   a. Insert each distinct ProjectPcn as a new ProjectId into the P2S ProjectDetail table.
   b. Insert an entry for each PCN/suffix pair into the P2S LegacyProjectDetail table.
   c. Insert an entry for each PCN/suffix pair into the P2S ProjectWorkPhase table.

3. Query PPMS ProjectDefinition table and retrieve each the remaining PCN/Suffix pairs.

```
select * from ProjectDefinition where
        (CAST( [ProjectPcn] as varchar) + ProjectSuffix) not in (
                SELECT distinct CAST( [SuperiorPcn] as varchar) + SuperiorSuffix
                FROM ProjectRelationship
                where (CAST( [SuperiorPcn] as varchar) + SuperiorSuffix) not in
                (select CAST( SubordinatePcn as varchar) + SubordinateSuffix from
                ProjectRelationship)
        )
and ProjectPcn in (select SubordinatePcn from ProjectRelationship union select
SuperiorPcn from ProjectRelationship)
```

   a. When a group of Subordinate PCN's associated with a Superior PCN uses the same Contract number, insert the Contract PCN/Suffix as a new ProjectId in the ProjectDetail table.
   b. Insert the subordinate PCN/Suffix pairs as phases in the LegacyProjectDetail table
   c. Insert the subordinate PCN/Suffix pairs as phases in the ProjectWorkPhase table.

4. Update the legacyContractId/legacyContractSuffix of the P2S ProjectDetail table with the PPMS ContractPcn/ContractSuffix.
5. For legacy purposes, save the work phase, funding level, add user, add date, update user, update date fields to the P2S LegacyProjectDetail table.
6. To get the funding information for each phase, perform a lookup in the PPPMS FundingHeader table using the funding information and populate P2S ProjectFunding table.
7. Retrieve each Transaction from the ObligationTransaction table and store in the P2S ProjectFundingTransaction table.
8. Retrieve each FileNumber from the ProjectFile table and store it in the P2S LegacyProjectFilenumber table.

Here is an example that shows how the projects PCNs may be retrieved, grouped, and inserted in to the new P2S system:

```
select * from ProjectDefinition
where ProjectPcn in  ( select SubordinatePcn from ProjectRelationship where SuperiorPcn = 30616
                       union
                       select SuperiorPcn from ProjectRelationship where SuperiorPcn = 30616 )
order by ProjectPcn, ProjectSuffix
```

Results | Messages

	ProjectPcn	ProjectSuffix	MasterPcn	MasterSuffix	WorkPhaseNumber	WorkPhaseName	ContractPcn	ContractSuffix	TerminiFrom	TerminiTo
1	30614	BR01	30614	X	4	BR. CONST.	30614	BR01	CALHOUN COUNTY LINE	INTERSECT OF CSX RA
2	30614	X	30614	X	0		0		CALHOUN COUNTY LINE	INTERSECT OF CSX RA
3	30615	X	30614	X	4	BR. CONST.	30616	X	BR OVER CONGAREE RIVER	10 MI NE OF ST. MATTI
4	30616	X	30614	X	3	RD. CONST.	30616	X	CALHOUN COUNTY LINE	INTERSECT OF CSX RA
5	30617	X	30614	X	2	R/W	0		CALHOUN COUNTY LINE	INTERSECT OF CSX RA
6	30618	X	30614	X	1	PREL ENGR	0		CALHOUN COUNTY LINE	INTERSECT OF CSX RA
7	30619	X	30614	X	5	UTILITY	0		CALHOUN COUNTY LINE	INTERSECT OF CSX RA
8	30628	X	30614	X	4	BR. CONST.	30616	X	BR OV CONGAREE SWAMP (#3)	7 MI S OF EASTOVER
9	30629	X	30614	X	4	BR. CONST.	30616	X	BR OV CONGAREE SWAMP (#2)	6 MI S OF EASTOVER
10	30633	X	30614	X	4	BR. CONST.	30616	X	BR OV CONGAREE SWAMP (#1)	5 MI S OF EASTOVER

Figure 120 - Project PCN Example

In this case, ProjectPCN's of 30615, 30617...30633 (all suffix X) have the same contract number "30616 X". So instead of making each of these a unique project in the ProjectDetail table, they become child records of 30616 X in the ProjectFunding table. For legacy purposes, we need to store the ProjectPCN's for each of these in the ProjectWorkPhase table.

So to reiterate, for each distinct SuperiorPCN/Suffix pairs, each unique Work Phase will be retrieved (both subordinate work phases and the superior work phase – notice that the superior work phase is reported for every record – it's 3 in this example.) As an example, below are the unique work phases for project ID 30616X. They are 1,2,3,4,5. Notice in this example that PCN 30614 has a different contract number than the rest. This is a unique case. For these cases, then PCN 30614 becomes its own projectID in the PRJP2S ProjectDetail table. And it will have one work phase record of type "4."

> **Note:** All PPMS projects that have individual federal project numbers must be imported into P2S as a separate (standalone) project. However, for these projects, their original Superior PCN (i.e. "superior with no superiors") will be included as a reference.

4.1.2 Pseudo-code for Associating Projects with Proposals in Web Transport

1. For each legacyContractID/suffix pair that has been inserted into the ProjectDetail table, query the Web Trns*port database to find the Contract ID assigned to this project. An example select statement to accomplish this is:

2. select * from ***propproj*** where pcn like '%30616%' order by pcn;

   Two records are returned:

Contid	Pcn
09.123B	030616
09.123BR1	030616RR1

3. To determine which Contid to use as this projects contractID, query the LETPROP table such as:

```
    select * from letprop where lcontid in  ('09.123BR1','09.123B') and letting =
max(letting);
```

The max letting date is 05/11/2010 from the 2 records.

Lcontid	Letstat	Letting
09.123B	W	11122008
09.123BR1	A	05112010

4. Update the Contract ID for this project in the P2S ProjectDetail table.

   In this case, LCONTID = 09.123BR1 has the latest Letting date so to update the ProjectDetail table, an update such as the following would be issued:

   Update ProjectDetail set contractID="09.123BR1", legacyContractID = 30616, legacyContractSuffix="X" where
   ProjectDetail.projectID = 30616 and
   ProjectDetail.suffix = "X";

NOTE:
Only PPMS data elements deemed pertinent to the new P2S system will be migrated. However, for reference purposes this will include the legacy project identifiers of superior PCN and file number, among others. Also note that it was mutually agreed upon that the data port process will not migrate expenditure data from PPMS, but instead load the initial expenditure data from a general ledger file.

After the final port of the PPMS data into the P2S database, the legacy PPMS database (mainframe or otherwise) will neither be updated by P2S nor queried to retrieve data.

4.2 System Integration

The P2S application allows users to create, manage and view project and contract information. Although much of the data is captured and read from the P2S database, other data will be read from external systems that are equally important to the management of projects and contracts. Furthermore, there are times when P2S will update other systems with project and/or contract information so that data common to both can be shared.

The communication mechanism between P2S and the external systems will vary based on what interfaces are available. Below are the external systems (i.e. data sources), the anticipated method of communication and the types of data that will be viewed and or transferred between each. Most data to be retrieved from each system has been specified in various "field to data mapping" tables in the applicable sections (i.e. Contractor/Contract status section 2.5.1.4). Although these data items will not be repeated in this section, a general description of the type of data retrieved from or pushed to the external system will be mentioned.

4.2.1 Web Trns*port

The Web Trns*port application provides the DOT with tools to manage proposals and to facilitate the letting process. Although the details have not yet been worked out, it is anticipated that Web Trns*port will provide a web service for P2S to use to retrieve data from and push data to the Web Trns*port database. Specifically, P2S will need to retrieve data for viewing purposes regarding actual let dates, vendor information, pay items and more. P2S will also need the ability to push to Web Trns*port a proposal with the associated projects, pay items and other proposal related attributes.

4.2.2 SiteManager

The SiteManager application is used by the DOT to track and report contracts, manage the payment of contractors and analyze contract data. Many of the SiteManager data items used to keep track of this information are needed in the P2S application for viewing purposes. Examples of this information include contractor information, key dates, monetary amounts, change orders and the assigned Resident Construction Engineer. At this time, it is expected that P2S will connect directly to the SiteManager database and retrieve information as needed. In order for this to be possible, a read-only connection to the SiteManager database will be required.

4.2.3 RIMS

The RIMS application manages roadway data for the DOT. This data not only contains the routes and milepoint ranges for each route, but also contains the functional and system classification of roads, road names, physical characteristics of roads, bridge information, etc. The data from the Roads and Bridges/RR Xings tabs in P2S is directly tied to this data in RIMS. For example, P2S will query the RIMS database to validate the existence of roads, bridges and railroad crossings. Other information that P2S will retrieve from RIMS includes the NHS and Functional Classification of a road segment, the city in which a road segment resides, the sufficiency rating of a bridge, etc. P2S will query the RIMS database using a direct, read-only database connection.

4.2.4 Primavera

The Primavera P6 application provides the DOT with the ability to plan, schedule, and track time for projects. P2S will query the Primavera database to retrieve information to be displayed on the Schedule tab. Key dates for environmental will also be obtained from Primavera. In addition to retrieving data, P2S will have the need to insert projects into Primavera. It is anticipated that the Primavera API will be used to interface between P2S and the Primavera database. If an API cannot be provided, P2S will directly connect to the Primavera database to query for schedule information. However, it is unknown at this time if the ability to insert new projects directly into the Primavera database is allowed or feasible if an API is not provided.

4.2.5 PM Entry

PMEntry is an in-house application used to add and update action items and comments for active projects, among other things. PMEntry will need to be modified so that project related information can be read from P2S. Examples of the data needed by PMEntry are project ID, program manager, project name and route information. PMEntry will also need to be altered so that it can update P2S with Let Date, Obligation Date and a remark regarding the Obligation date (i.e. "This date changed from <date> to <new date>).

PMG will provide 80 hours of support to aid SCDOT in the integration effort required to provide PMEntry with the data it needs from P2S and to make the data available from PMEntry to P2S.

4.2.6 General Ledger

P2S keeps track of funds obligated for a project. However, SCDOT's general ledger application keeps track of all expenditures for a project. In order for P2S to report on these expenditures, data must be imported from the general ledger application into P2S. Section 2.3.2.4.3 of this document provides details for this process.

4.2.7 CBES

CBES is an in-house application that supports the Maintenance office in estimating pay items for projects and grouping projects into proposals. As such, CBES needs each project's road segment information from P2S so an estimate can be adequately determined.

P2S will provide a web service for CBES to use for retrieving and pushing information back and forth between the systems. Specifically, web methods from the P2S web service will be provided for:

- Retrieving projects and the associated routes from P2S.
- Inserting proposals, the associated projects and pay items into P2S.
- Updating the "current cost estimate" for each project in P2S.

It will be the responsibility of SCDOT to modify the CBES application to call the P2S web methods. Additionally, CBES should be modified so that:

- Beginning and ending milepoint values may be adjusted within CBES and changes uploaded to P2S.
- Proposals, projects, routes and pay items will no longer be exported to PES/LAS (Web Trns*Port).

The P2S web service required to support CBES will be done using the 80 hours of support stated in the P2S SOW.

5. Modifications to Related Systems

5.1 ITMS Modifications

PMG will modify ITMS to accommodate the use of the new P2S database. The P2S database will replace both the Master LRS table and the PPMS database. All systems that use the master LRS table will therefore need to be modified or retired. The PCN Admin tab in the ITMS web application and the Master LRS/PCN desktop update utility will no longer be needed to maintain the list of routes. The routes will be created and maintained in the P2S system.

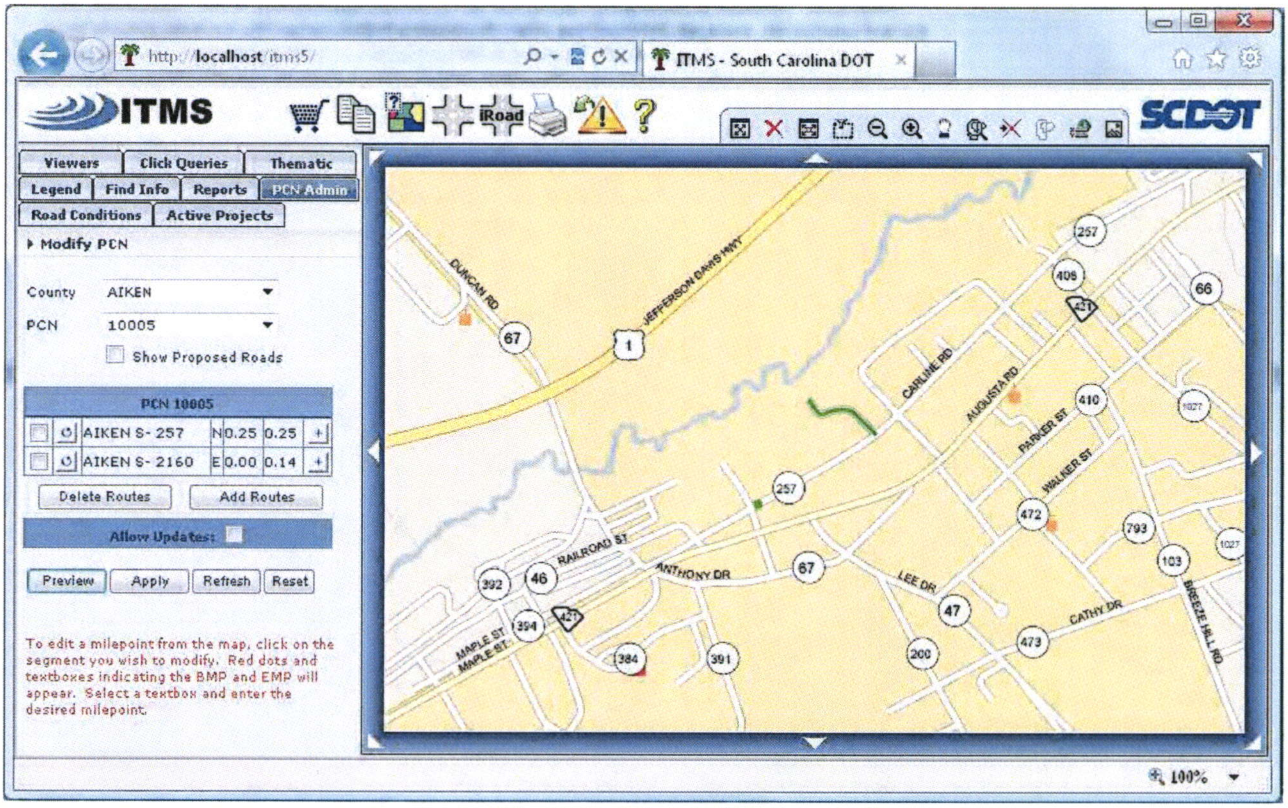


Figure 121 - PCN Admin Interface Removed

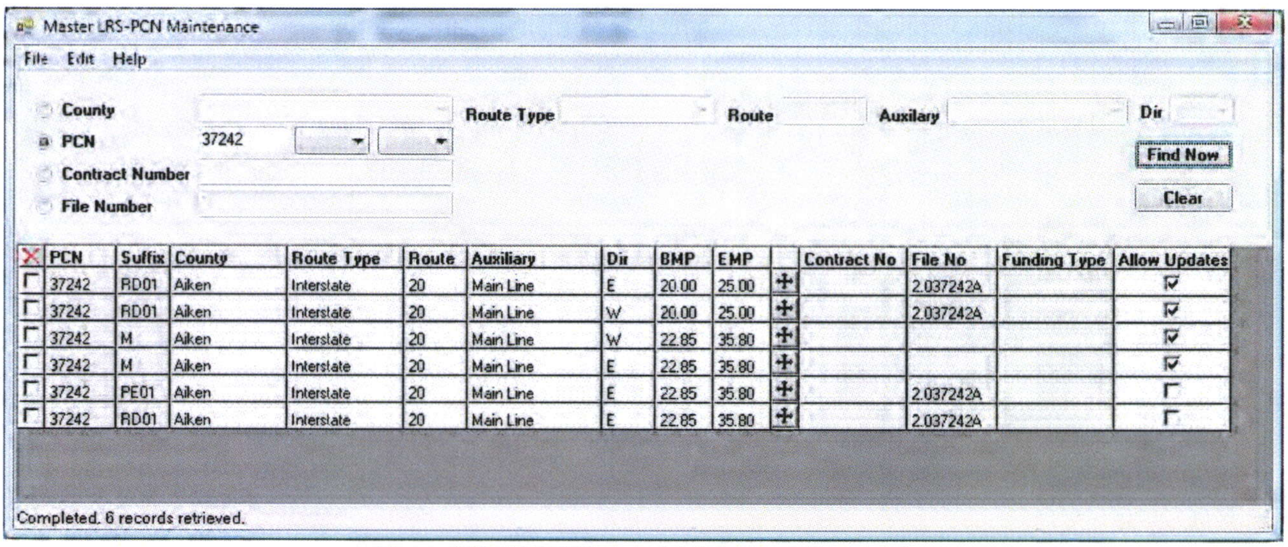


Figure 122 - LRS-PCN Data Maintenance Removed

Since the PPMS database will no longer be used and the data will be migrated to the new P2S database, the ITMS interface will only have a minor change. A new information type, Project ID, will take the place of PCN/Suffix number and will appear as follows. Please note that since the PPMS data will be migrated into P2S, the PCNs from the legacy PPMS will become the Project IDs and can still be searched in the same manner. New projects created in P2S will no longer have PCN suffix.

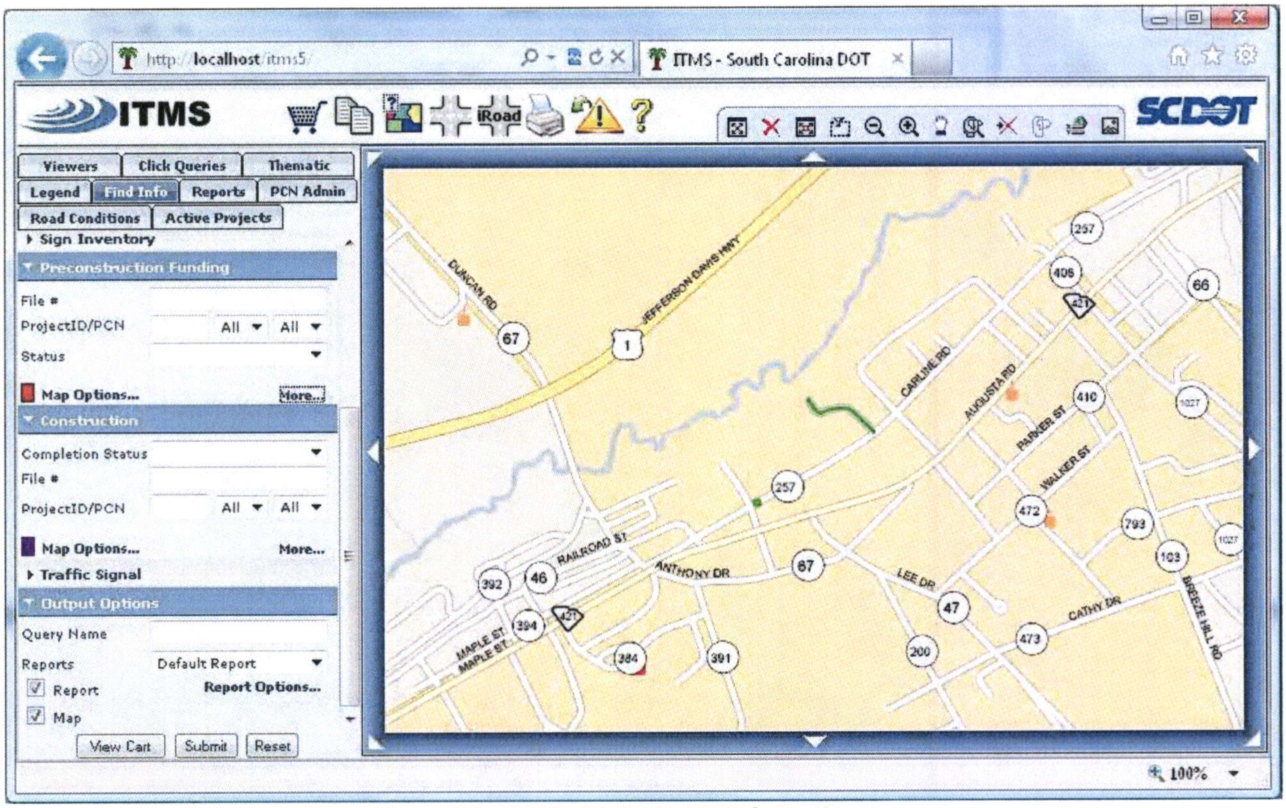


Figure 123 - ITMS with Project ID Information Type

While there will be minor interface changes as a result of the new P2S system, the underlying software of ITMS will have several significant changes. The PPMS information adapter will be discarded and a new P2S adapter will be designed and developed. The Construction and ODS information adapters will be modified to use the P2S adapter where PPMS data was used previously. The INFO_TYPES table will also be modified to include the new project programming data items in place of the PPMS data items.

5.2 Google Active Projects Modifications

PMG will modify the Google Active Projects web application to reference the P2S database instead of the PPMS database and the Master LRS table. The application will retrieve the routes from the ProjectRoute table of the new P2S database, dynamically segment the data with GIS HIWHAYS table using GeoMedia WebMap, generate KML, and display in a Google map. PMG will develop and test the Active Projects map helper application on the Intranet SMPITMS server and then provide the updated software in an installable MSI file format to SCDOT. SCDOT will integrate this map portion with their existing Active Projects website and deploy the application to the Internet.

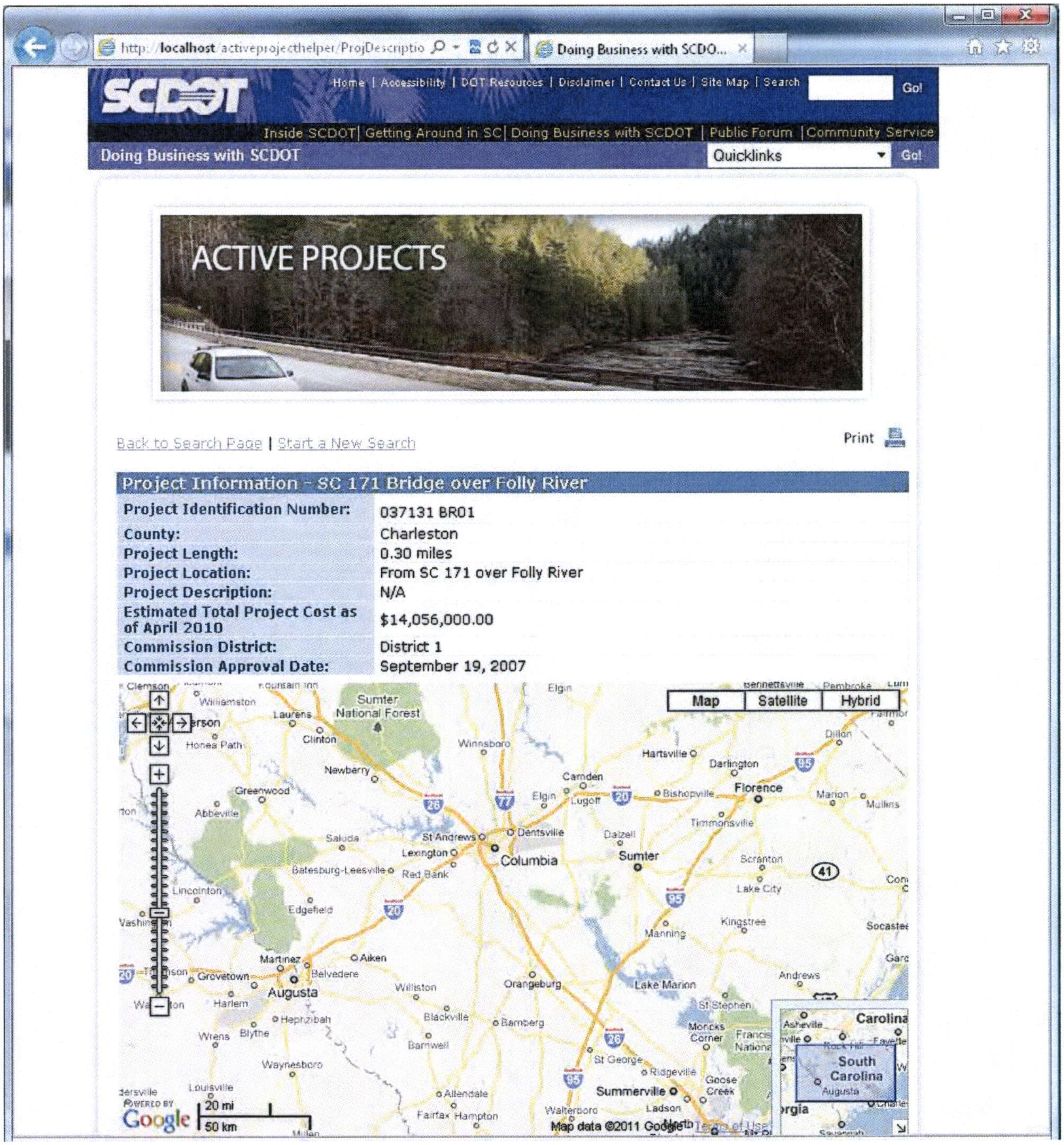


Figure 124 - Active Projects

APPENDIX B

PAR Procedures Document

PROGRAM ACTION REQUESTS (PAR) PROCEDURES DOCUMENT

INDEX

PROGRAM ACTION REQUESTS (PAR) PROCEDURES DOCUMENT

INTRODUCTION

The purpose of this document is to provide written guidance for the process of completing a Program Action Request (PAR). These guidelines are intended to assist department personnel in the earliest stage of a project's development. By providing a reference for completing the electronic PAR form, Federal Program Administration anticipates improved consistency of project and program data into Preconstruction Project Management System (PPMS) and Primavera project tracking systems. Additionally, new efforts to better track program funding according to fiscal years is intended to assist with improved STIP monitoring.

The process outlined in this document is intended to capture the majority of the activities performed by SCDOT and the FPA office. This electronic version of the PAR can be easily modified to align with future Commission and/or Federal policy.

PROJECT INITIATION

Project Approval

The initiation of a project begins with one of the following actions:

- The project is listed on the Commission Approved Project Priority list
- The project is added to the STIP or State Program
- The project falls on a priority list that has "Programmatic" approval from the Commission (ie: MPO TIP)
- The project is a programmatic project in which funding is approved by the Commission (ie: Interstate Guardrail)
- The project is selected by the CTC and is programmed by the C Program Coordinator **

Preliminary Project Schedule

After project approval, a preliminary schedule is required. A Program Manager completes and submits a Schedule Request Form to the Program Controls Unit. The request form can be accessed via the *Preconstruction Resource Management Intranet* site using the Program Controls tab, and selecting Forms. The Schedule Request Form has been combined with the PAR form and can be filled in by checking the Schedule Request box at the top of the form. All information in the General section will be shared between documents. Project templates are also available on the Program Controls section of the Intranet site and can be used to tailor a preliminary project schedule. A preliminary schedule will be returned to the Program Manager and Regional Design Manager (if applicable). This schedule can be used as the starting point for your project scoping meeting and can be further modified as necessary.

Once a preliminary schedule is complete a Program Action Request (PAR) is needed to create new project identifiers. The PAR form can be accessed via the *Preconstruction Resource Management Intranet* site using the Federal Program Administration tab, and selecting Forms.

** New C Project identifiers will be created by the C Program Coordinator after CTC project selection and SCDOT acceptance. Upon project creation, a placeholder transaction will be created in PPMS until a PAR is received from the Program Manager to revise obligations. All other procedures will be the same. **

PAR FORM COMPLETION

Actions Requiring a PAR Submittal

A PAR is required for the following project actions:

- To create a New Project and provide project identifiers such as project number, file number, and relevant PCNs.
- To revise funding obligation and/or letting dates for any phase of an existing project.
(**NOTE:** Obligation and/or letting dates can be moved at the monthly Primary Meeting with the exception of those changes that will move the project from one fiscal year to another. A fiscal year change requires a PAR submittal.)
- To revise project cost estimates. New cost estimates will be used to update obligations/authorizations in PPMS and to update program tracking records (ie: FMSP projects).
- To inactivate a PCN or project that will no longer be used or pursued; a PAR will also be required to reactivate a PCN if needed.
- To request to close a project to actual expenditures.

Guidelines for Completing a PAR

When completing a PAR form, please use the guidelines below to ensure accuracy and consistency across departments. Following these steps can eliminate processing delays or PARs being returned by the Federal Program Administrator.

General Information Section

A PAR is unable to be submitted without completing the below required fields.

- *Commission Approval Date*
- *Program Manager*
- *Required Action*
- *Program*
- *Work Type*
- *Road / Route*
- *Termini From*
- *Termini To*
- *County*
- *Commission District*
- *MPO / COG (used for geographical purposes only)*
- *Beginning & Ending Mile points*
- *Project Description*
- *STIP Page*

Commission Approval Date is required for any project on the Commission Approved Priority list. A Program Manager should use the last approval date that the Commission took action on the project (ie: Use the date that the Commission approved a STIP Revision to use additional funds). If a PAR is being submitted on a project developed before the Commission Priority list was implemented, denote this by entering "Prior to Act 114". When programming Sales Tax or other non-approved program projects, enter "N/A" in this field.

Request Date is populated automatically when the PAR is approved by the appropriate Director or designated representative; this is to ensure that the date is the PAR submittal date and to eliminate confusion in PAR processing.

When *Program Manager* is selected, the *Department* and *Approved by* fields are automatically populated.

When selecting the project *Program*, please ensure that it corresponds with the STIP distribution chart (ie: an MPO project falls under the Urban System Upgrade program and COG projects are under the Rural System Upgrade).

The *Rd*/Route field should consist of a Route prefix, Route Number, and if applicable a Route suffix. In order to maintain route consistency, it is requested to only use the following formats when inputting information in the *Rd/Route* field. Route prefixes should be limited to I-, SC, US, S-, or L-. Route suffixes should be limited to AL (Alternate), BP (Bypass), BS (Business), CO (Connector), or SP (Spur). (ie: S-128 not S-46-128; US 17 BS not US 17 Business). This field combined with the *Beginning* and *Ending Mile points* are used to create project maps in ITMS. These maps are used in several applications such as FMSP, PSRs and the Active Projects Internet site. Mile points are also required by FMIS for any project with federal funding. When programming Intersection Improvement projects, use the major route to define the *Rd/Route* field and indicate any crossing route(s) in the additional *Rte* fields. When programming a project with multiple routes such as resurfacing projects, type "Various" in the *Rd/Route* field and attach a document with a list of all routes and their associated mile points.

Bridge Information Section

When programming a project that includes work on an existing bridge, the *Bridge Structure Number* and its *Sufficiency Rating* must be included. If more space is needed for multiple bridges, use the *Project Details* section.

Funding & FMIS Input Section

Identify funding sources using the appropriation type checkboxes and their corresponding dropdown selections. Multiple funds can be denoted in this section, however use the *Remarks* box to show the specific breakdown or fiscal year amounts as outlined in the STIP.

If a project has federal funding being utilized, the *System Code*, *On National Highway System*, and *Functional Class* designations must be selected for input into FMIS. For intersection improvement projects, always use the major route when defining federal code designations. The System Codes are defined by FHWA as follows:

> <u>Interstate</u>: A subset of the NHS system and are federal, limited access highways, etc.
> <u>NHS Non-Interstate</u>: Any route that does not meet the Interstate classification but can still be found on the NHS system.
> <u>Other Federal-Aid Hwy</u>: These routes are eligible for STP funding. Through elimination, they do not include interstates or NHS routes. They also do not include rural minor collectors and local roads and streets.
> <u>Not on Federal-Aid Hwy</u>: Roads not on Federal-Aid Hwy include the two lowest functional systems, local roads and streets and rural minor collectors. This system of roads is generally not eligible for federal-aid, except in circumstances such as off-system bridge work and certain safety activities.

The Functional Class codes are defined by the *SCDOT Highway Design Manual* (Chapter 9.4) as follows:

Freeways & Expressways: The highest level of principal arterial. These facilities are characterized by full control of access, high design speeds and a high level of driver comfort and safety.
Other Principal Arterial: These facilities are usually two or four lanes with or without a median. Partial control of access is desirable along these facilities.
Minor Arterial: In rural areas, these facilities will provide a mix of interstate and intercounty travel service. In urban areas, they may carry local bus routes and provide intercounty connections, but they will not for example, penetrate neighborhoods.
Major Collector: These routes act as intermediate links between the arterial system and points of origin and destination; they will have lower traffic volumes and speeds than arterials.
Minor Collector: These serve intercounty travel needs and provide connections to the arterial system; they will have lower traffic volumes and speeds than arterials.
Local: All public roads and streets not classified as arterials or collectors; they are characterized by their many points of direct access to adjacent properties and their relatively minor value in accommodating mobility.
No Functional Class: A road where no functional class has been defined.

Road Data Services has functionally classified all public roads and streets within South Carolina that are maintained by the Department. For highway design, it is necessary to identify the predicted functional class of the road or street for the selected design year (e.g., 20 years beyond the project completion date). Road Data Services will provide this information to the designer.

Obligation Table

The *Obligation Table* is made up of calendar fields that can be used to indicate obligation months by phase. These are entered using month/year format.

Obligation totals are to be shown in $1000's of dollars. When revising an obligation total, please indicate what the total obligation should be for that phase/PCN in the table. Use the *Remarks* section to further explain the increase or decrease in the amount.

When requesting changes to an existing project, the PCN number must be included on the PAR for processing purposes. If new project identifiers have been requested, the Obligations Management Office will use these fields to assign new PCN numbers.

If projects are intended to be in the same construction contract, they should be linked together. To link a project, a Contract or lead PCN (lowest Construction File Number PCN) must be defined for reporting purposes. The Contract PCN is entered into the *Link to PCN* field for correct setup in PPMS.

STIP Compliance

Federally funded projects must be in the Statewide Transportation Improvement Program before a PAR can be processed. The Program Manager is required to denote the STIP Page on the form for verification by the Federal Program Administrator. Use the comprehensive updated STIP to find the latest STIP page and revision number that the project is included on. When programming a project that is not required to be in the STIP, mark "N/A" for this field.

Remarks Section

The *Remarks* section is used for any additional or important explanation of the action being requested. This section is for PM and RPG leaders to add comments pertaining to the project. Comments can be distinguished by changing the font, color, or attributes associated to the remarks. Items such as the Contract ID on a Consultant contract, SCDOT's maximum contribution on a Participation Agreement, and/or a specific monetary breakdown of multiple funds are examples that can be shown in the *Remarks* section.

Schedule & Attachments

A preliminary project schedule should be prepared with the Program Controls Unit, and indicated by checking the box in the bottom left corner of the form. The preliminary project schedule does not need to be submitted to the Federal Program Administrator if it has been prepared through the PCU office.

Any attachments to the PAR can be indicated using the *See Attachments* checkbox also located in the bottom left hand corner of the form. In order to attach documents directly to the PAR, Adobe Acrobat Professional must be installed on the user's machine. By clicking on the paperclip icon in the bottom left corner of the application and selecting "Add", the user will be prompted to "Save A Copy". This copy of the PAR will not have reader-extended capability but will allow the user to attach documents within the PAR itself. Save the PAR to a network or local folder. Close the open version of the PAR and open the saved local copy, choose the paperclip icon and select the Add button at the top of the Attachment menu. Attachments can be any document format.

If Adobe Acrobat Professional is not installed, attachments can be added to the submittal email message. A member of the Federal Program Administration office will attach the documents within the PAR for processing and archival purposes.

Please refer to Attachment A for any other field details or restrictions.

Importing Data from Previous Version

Information on an existing PAR (version 9/8/2009 or 2/24/2010) can be imported into the new form to avoid having to re-enter data if Adobe Professional is installed on the machine. To do this:

Open the old form
Choose Forms > Manage Form Data > Export Data
Save the xml file
Open the new PAR form
Select the "Import Previous" button at the top of the form
Navigate to the xml file and select

PAR APPROVAL & SUBMITTAL

Regional Production Groups

All PARs being submitted by or for a member of a Regional Production Group (RPG) must be submitted and approved by the RPG leader. A PAR can be emailed to the RPG leader for concurrence by using the Email icon at the top left of the Adobe application screen. RPG leaders have the capability of making any changes to the PAR as warranted and can use the *Remarks* section for any comments in addition to those made by the Program Manager.

Director / Supervisor

Before PARs can be accepted by the Federal Program Administration office, they must be approved by the corresponding Department Director / Supervisor. The following have signature authority:

- Director of Preconstruction
- Director of Construction
- Director of Traffic Engineering
  - Traffic Operations Engineer
  - Traffic Safety Engineer
- Director of Maintenance
- Director of Planning
  - Research Engineer
- Director of Mass Transit
- Director of Administration
- Local Program Administrator
- Director of Business Development & Special Programs

To request approval by a Director / Supervisor, use the *Submit for Approval* button located at the top right hand side of the PAR form. A Save dialog box will open to save a local copy of the filled out form for recordkeeping purposes. Once saved, an email message will open. The "To" box will be populated based on the corresponding Director / Supervisor. The "Subject" will be populated based off of the *County_Rd/Route* fields. This name will be used for archival purposes and must be included in the PAR submittal email. The "Body" of the email message will be populated using the *Requested by* field and can be changed to fit the user's needs.

The Director / Supervisor can make adjustments to the PAR as necessary. Once complete, the Director / Supervisor can denote his / her approval and concurrence by clicking on the *Approved by* field, saving a local copy, and applying his / her signature. When finished an email message will open to submit the PAR to the Federal Program Administration office. The "To" box will automatically be populated with the group email address, the "Subject" will again be populated using the *County_Rd/Route* fields and the "Body" of the message will include the Director / Supervisor's title information. Again, this can be customized to fit the user's needs before submittal.

Federal Program Administrator

Once the PAR is submitted to the Federal Program Administrator, it will be logged into the PAR Record Management System by a member of the FPA office and will be ready for verification and concurrence by the Federal Program Administrator.

The Federal Program Administrator has the ability to make changes to the PAR as necessary. The Federal Program Administrator may return any PAR that does not comply with the above stated guidelines. Upon concurrence, the Federal Program Administrator will apply his / her signature, prompting an email message to Obligations Management. This email will also be courtesy copied to the corresponding Program Manager, RPG Leader, Director / Supervisor and members of the Federal Program Administration office. If Safety funds are used, a courtesy copy will also be sent to the Traffic Safety Engineer.

PAR PROCESSING & ROUTING

Obligations Management

All approved and signed PARs are sent to the Obligations Management Office for processing. Requests made are initiated or updated in PPMS and FMIS and an email notification is sent out as follows. The Obligations Management staff should use the below guidelines when routing PAR notifications.

- PARs notifications will be sent to the corresponding Director / Supervisor, RPG Leader, Program Manager and/or Assistant Program Manager.
- A copy of all PAR notifications will be sent to the Federal Program Administration Office and the Program Controls Unit.
- All PAR notifications involving a Local Public Agency in addition to the above will be sent to the Local Program Administrator and the Local Public Agency Administrator.
- All PAR notifications involving a CTC action in addition to the above will be sent to the Local Program Administrator and the C Program Coordinator.
- All PAR notifications involving Safety funds in addition to the above will be sent to the Traffic Safety Engineer.

Once a PAR notification has been received, a member of the Federal Program Administration office updates the document on the PAR Record Management System.

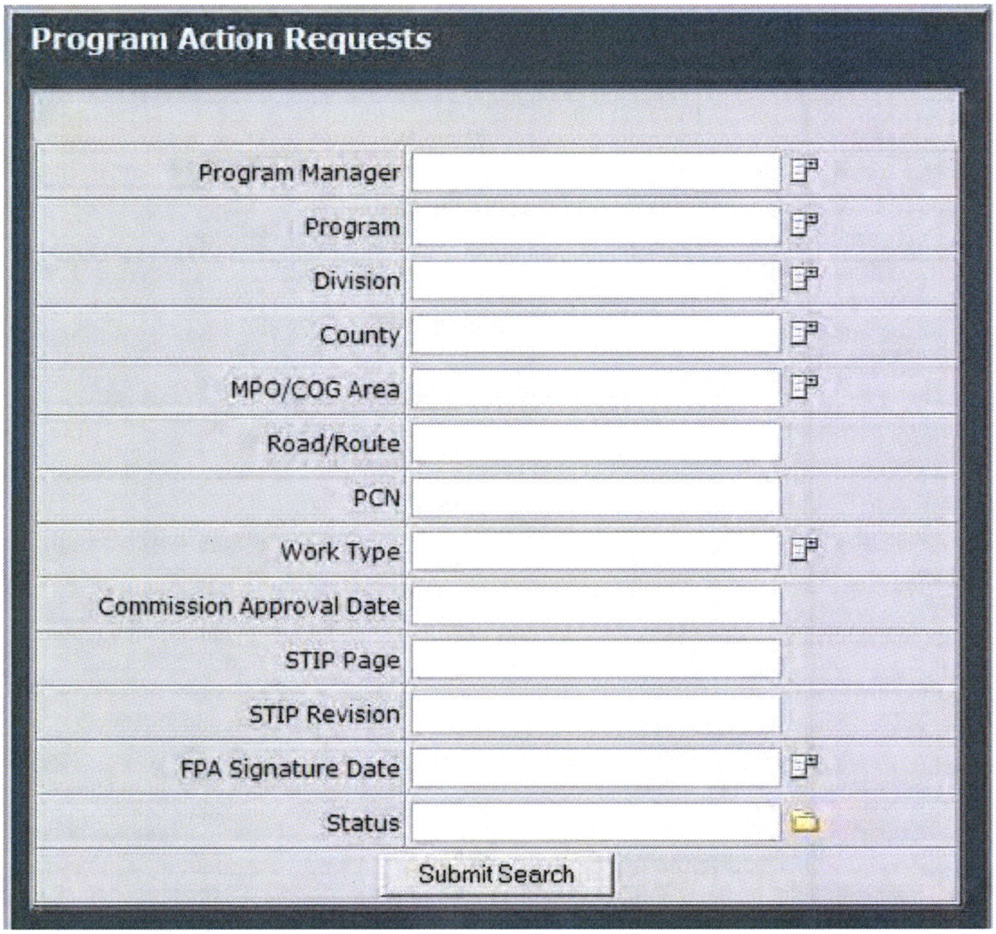
PAR RECORD MANAGEMENT SYSTEM

All PARs are imported into the PAR Record Management System, which can be accessed via the *Preconstruction Resource Management Intranet* site, under the Federal Program Administration tab. This system can be used as both a tracking system and a PAR archival system. Data will be exported directly from the submitted PAR and imported into the Record Management System.

Search Criteria

PARs can be searched by any of the following fields:

- Commission Approval Date (use the following format when searching: M/D/YYYY)
- Program
- County
- Road/Route
- PCN (use the six digit construction number; ie: 030616)
- Program Manager
- Division
- Work Type
- MPO/COG Area
- STIP Page
- STIP Revision
- FPA Signature Date (use the following format when searching: M/D/YYYY)
- Status



Tabs to the right of the search fields indicate a user can choose from a specific list. As a way of tracking a submitted PAR, a Program Manager can search the Status field using three categories. These include:

- <u>In FPA</u>
  Meaning the PAR resides in the Federal Program Administration office and is awaiting verification by the Federal Program Administrator.
- <u>In OM</u>
  Meaning the PAR has been signed by the Federal Program Administrator and has been submitted to the Obligations Management office for PPMS and FMIS processing.
- <u>Processed</u>
  Meaning the PAR has been processed and is now stored for archival purposes.

Search Results

The returned search results can be sorted by the following fields:

- County
- Route
- Program Manager
- Status

Use the Information icon to view the imported data. Use the Magnify tool to actually view the stored PDF. Archived PARs are the finalized document and should include all notations, revisions, and remarks that are incorporated in this process. For example, PARs with a "Processed" status could have remarks from any or all of the following reviewers:

- Program Manager
- RPG Leader
- Director / Supervisor
- Federal Program Administrator
- Obligations Management staff

PARs can be viewed and saved to your local hard drive if needed, but any changes made to a PAR through the Record Management system will not be saved in order to historically maintain the accuracy of the information that was submitted and processed.

For questions regarding the PAR procedures, electronic PAR form or the PAR Record Management System, please contact a member of the Federal Program Administration Office.

DEFINITIONS

Act 114
Act adopted in 2007 by the South Carolina General Assembly requiring SCDOT to ensure that transportation projects originate from an established priority list

Active Projects
Internet site to give detailed information to the public with regards to current projects being designed and/or constructed by SCDOT (http://dbw.scdot.org/activeprojects/Default.aspx)

COG
Council of Governments

FMIS
Financial Management Information System used by FHWA

FMSP
Financial Management Strategic Planning system

FPA
Federal Program Administration office

Functional Class
A FMIS required field that groups streets and highways into classes, or systems, according to the character of service they provide as classified in the *Highway Functional Classification* publication.

ITMS
Integrated Transportation Management System

Letting
The date that bids are received from perspective construction contractors

MPO
Metropolitan Planning Organization

Obligation
Future date to commit funds to a project or phase of a project's development

PAR
Program Action Request Form

PCN
Project Control Number; previously referred to as PIN number

PSR
Project Status Report; can be run from the Intranet Project Management Reporting System

Program Controls Unit
Department that creates and manages project schedules through the use of Primavera

Program Manager
Individual responsible for all development activities of a project from design through construction

Reader-Extended
Allows the Adobe pdf form to be filled out and saved by those users only having access to the Adobe Reader application

STIP
Statewide Transportation Improvement Program

System Code
A FMIS required field to indicate the system on which the project is located as described in Federal code 23 U.S.C. 103.

SCDOT
South Carolina Department of Transportation

TO: Federal Program Administrator

PROGRAM ACTION REQUEST

COMMISSION APPROVAL	(Attached Calendar) Use latest Approval Date
DATE OF REQUEST	(Populated Date on Approval Signature)
REQUESTED BY	(Text Field)

PROGRAM MANAGER	(Dropdown - Required)	(Populated) Department
REQUESTED ACTION	(Dropdown - Required)	
PROGRAM	(Dropdown - Required) Corresponds to STIP Distribution Chart	
WORK TYPE	(Dropdown - Required)	
ROAD / ROUTE	(Text Field - Required) Limited to 20 Characters	
LOCAL NAME	(Text Field)	
TERMINI FROM	(Text Field - Required) Limited to 25 Characters	
TERMINI TO	(Text Field - Required) Limited to 25 Characters	

COUNTY	(3 Dropdowns - At least one is Required)
CITY / TOWN	(Text Field)
COMMISSION DISTRICT	(Dropdown / Text Field - Required)
MPO / COG AREA	(Dropdown - Required)
MAINLINE LENGTH	(Numeric Field)

RTE	(Text - Req)	BEG MP	(Num - Req)	END MP	(Num - Req)
RTE	(Text)	BEG MP	(Text)	END MP	(Text)
RTE	(Text)	BEG MP	(Text)	END MP	(Text)
RTE	(Text)	BEG MP	(Text)	END MP	(Text)

BR. STRUCTURE(s): (Text Field) If programming a project with existing bridge work, bridge structure number and sufficiency rating are required. ** | Sufficiency Rating | (Text) ** | ☐ Off System

PROJECT DETAILS: (Text Field) Include a brief project description and/or use this area for any overflow information.

If using federal dollars, these classifications must be selected.

Funding Sources
- ☐ *Federal using (Dropdown)
- ☐ State using (Dropdown)
- ☐ MPO/COG Program (Dropdown)
- ☐ Enhancement (Dropdown)

Work By
- ☐ SCDOT
- ☐ Consultant Firm (Dropdown / Text Field)
- ☐ Local Public Agency (Text Field)

System Code
- ☐ Interstate
- ☐ NHS Non-Interstate
- ☐ Other Federal-Aid Hwy
- ☐ Not on Federal-Aid Hwy

On National Hwy System
- ☐ Yes
- ☐ No

Functional Class
- ☐ Freeways & Expressways
- ☐ Other Principal Arterial
- ☐ Minor Arterial
- ☐ Major Collector
- ☐ Minor Collector
- ☐ Local
- ☐ No Functional Class

Obligation / Letting Schedule & Obligation Amounts

Work Phase	Obl. Date (Mo/Yr)	Let Date (Mo/Yr)	Obl. Amount ($1000)	PPMS PCN
PE by SCDOT	(Calendar Field)		(Text Field) Use TOTAL Obligations	(Text Field)
PE by Consultant				
Right-of-Way				
Utilities				
Railroad				
Road Construction		(Calendar Field)		
Bridge Construction				
Other				

NOTE: If a PCN has previously been assigned to this project, please note it on the appropriate phase of work. If you are programming a new PCN that needs to be linked to an existing project, please provide the Contract PCN here: | Link to PCN: (Text Field)

***Federally funded projects must be in the State Transportation Improvement Program. This project complies with the STIP on:**

Page	Revision	Date
(Text Fields) Use latest STIP Page & Revision Number		(Calendar Field)

(Signature Field) Indicates Verification by Federal Program Administrator

Federal Program Administrator | Date

For Obligations Management Use Only

PCNs Created	(Text Fields) For use by Obligations Management Only
PCNs Revised	
Project Number	
File Number	
Quality Control	

REMARKS: (Text Field) For use by the Program Manager and/or RPG Leader

ADMIN. REMARKS: (Text Field) For use by the Director/Supervisor and/or the Federal Program Administrator

Check to indicate attachments

Check to indicate the project has a Primavera schedule

☐ See Attachments ☐ Project has Schedule

(Signature Field) Indicates Approval by the corresponding Director/Supervisor

Approved by the (Populated Field) Director/Supervisor Title

PAR Form 31B-R2: Revised & Distributed 7/16/2010

APPENDIX C

P2S User's Manual

South Carolina Department of Transportation

Lynsee R. Gibson

User's Guide

Prepared By

PMG SOFTWARE PROFESSIONALS

Table of Contents

Table of Figures

1. The Home Screen

The home screen displays the projects which are of interest to the user. The user has several ways to select which projects are shown by default upon entry to P2S. The user may also change the display settings for these projects utilizing map functions. These options are defined below.

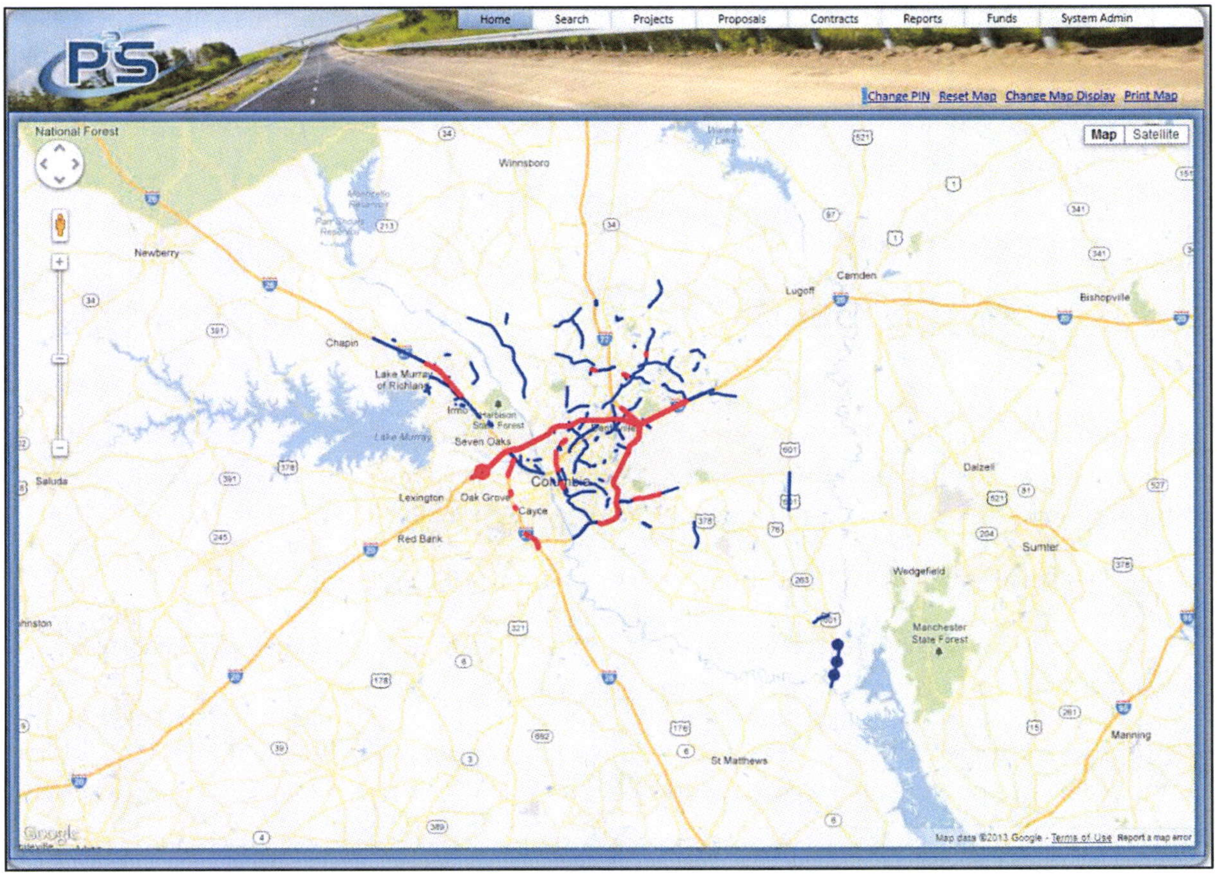


Figure 1 - The Home Screen

1.1 Changing the Map Display

Resetting the map: Clicking the **Reset Map** button will erase previously shown projects, and zoom out to focus on the entire state rather than a particular project within.

Selecting projects to display: To swap the project displayed on the map with another project, click the **Change Map Display** button. You will then be presented with the **Map Display Options** menu, which allows you to choose from one of five project display options, as shown below.

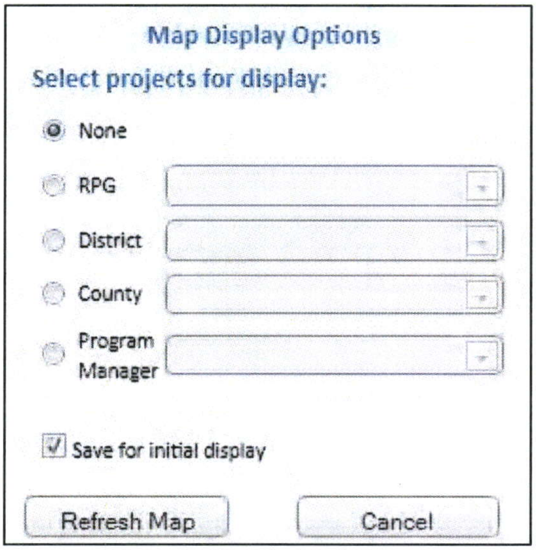


Figure 2 - Map Display Options

Select the radio button that pertains to the desired group of projects to display, and then use the corresponding dropdown menu to select the criteria to be displayed. You have the option to save your chosen criteria so that it may be loaded when the map loads by checking the **Save for Initial Display** box. After choosing the display options, click **Refresh** to update the map.

Note: Only the selected radio button's criteria will be shown once the map is refreshed.

Zooming, panning, and street view: To zoom in and out of the map, use the zoom scrollbar to adjust the map towards your desired distance. *Note:* You can also use your mouse wheel or click the + and – buttons to zoom. The zoom toolbar is located on the upper left hand side of the *Home* screen.

Use the directional pad to pan up, down, left, or right on the map.

To initiate street view, drag the orange humanoid to the desired location on the map. Once in street view, you may pan or rotate the camera to adjust your view.

Changing between map and satellite: To switch the map mode between **Map** and **Satellite**, click the corresponding button. *Note:* The **Map** button has an option to toggle terrain on or off, while the **Satellite** button has the option to toggle labels on or off.

Printing the map: To print the displayed portion of the map, click the **Print Map** button. Your operation system's standard print options will appear, and you can select the proper options from there.

Changing PIN: To change your PIN, click the **Change PIN** link below the menu buttons. The following menu will appear.

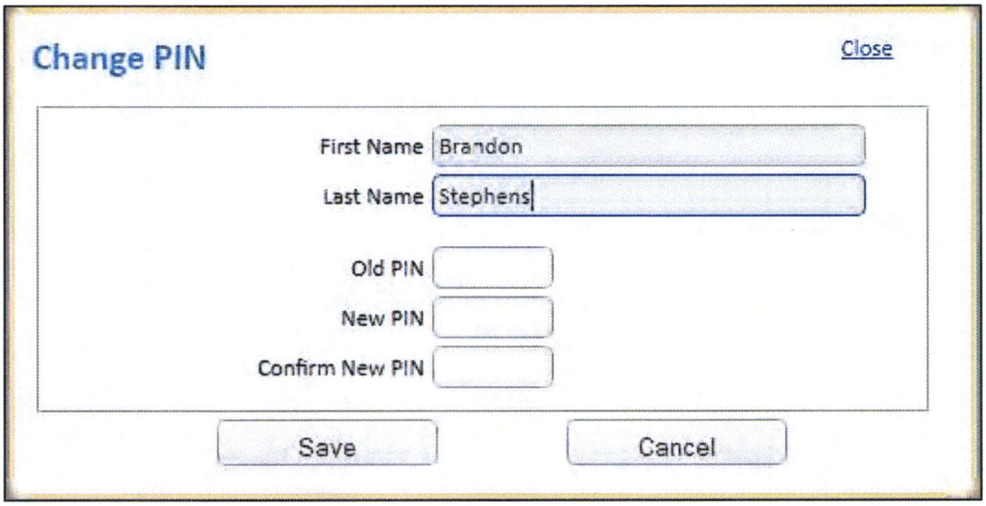


Figure 3 - Change PIN Interface

Enter the proper credentials and click **Save** to save your new PIN or **Cancel** to cancel the operation.

Viewing a Map Bubble: To view a map bubble, click on any existing project displayed on the map. A bubble containing the project name, ID, and description will pop up, as below.

Clicking on one of the project ID's will take you to its **Project Summary** report, which is displayed on the next page.

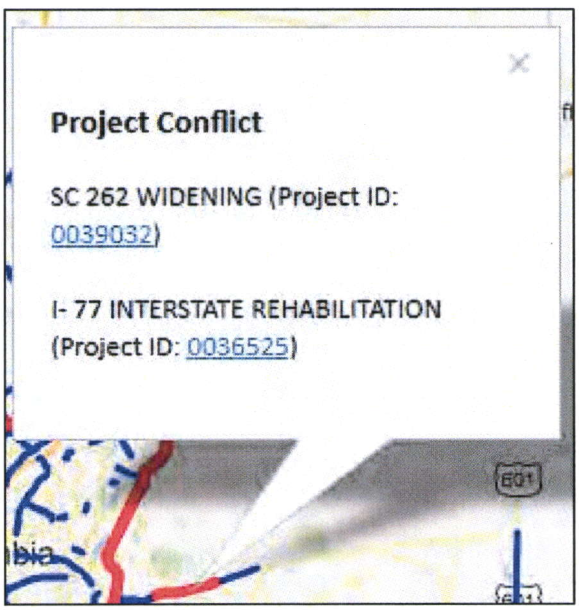


Figure 4 - Map Bubble

Project Summary Report

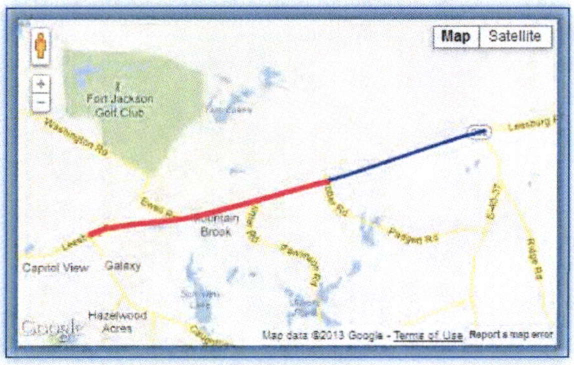
ProjectID: 0039032

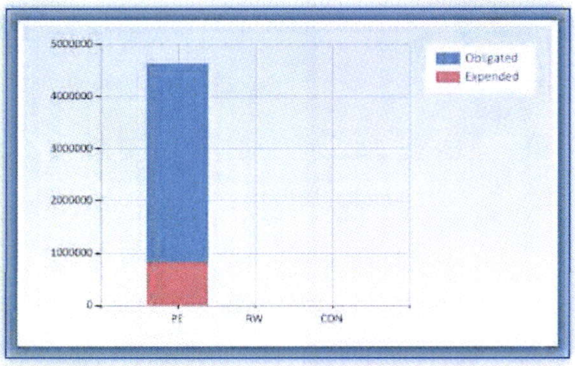
Print

Program Manager: Larry Gibson **SC 262 WIDENING**

Project Description: S-88 (FAIRMONT) S-37 (LOWER RICHLAND) (LEESBURG ROAD)

Project Status: Active





Project Location: RICHLAND SC 262 E from MP 1.690 to MP 5.390

TOTAL OBLIGATED	$4,629,930.00
TOTAL EXPENDED	$827,873.87

Letting	N/A
Award	N/A
NTP	N/A
Original Completion	N/A
Current Completion	N/A
SWC	N/A

Bid Amount	$0.00
Approved CO Amount	$0.00
Current Amount	$0.00
Pending CO Amount	$0.00
Anticipated Amount	$0.00

Preliminary Engineering Funding Authorized	12/03/2009
Obligated	$4,629,930.00
Expended	$827,873.87
Variance	$3,802,056.13

Right of Way Funding Authorized	N/A
Obligated	$0.00
Expended	$0.00
Variance	$0.00

Construction Funding Authorized	N/A
Obligated	$0.00
Expended	$0.00
Variance	$0.00

Figure 5 - A Project Summary Report

2. Search – Projects

The **Search** function can be used to find project or contract information. This section will focus on searching for project information.

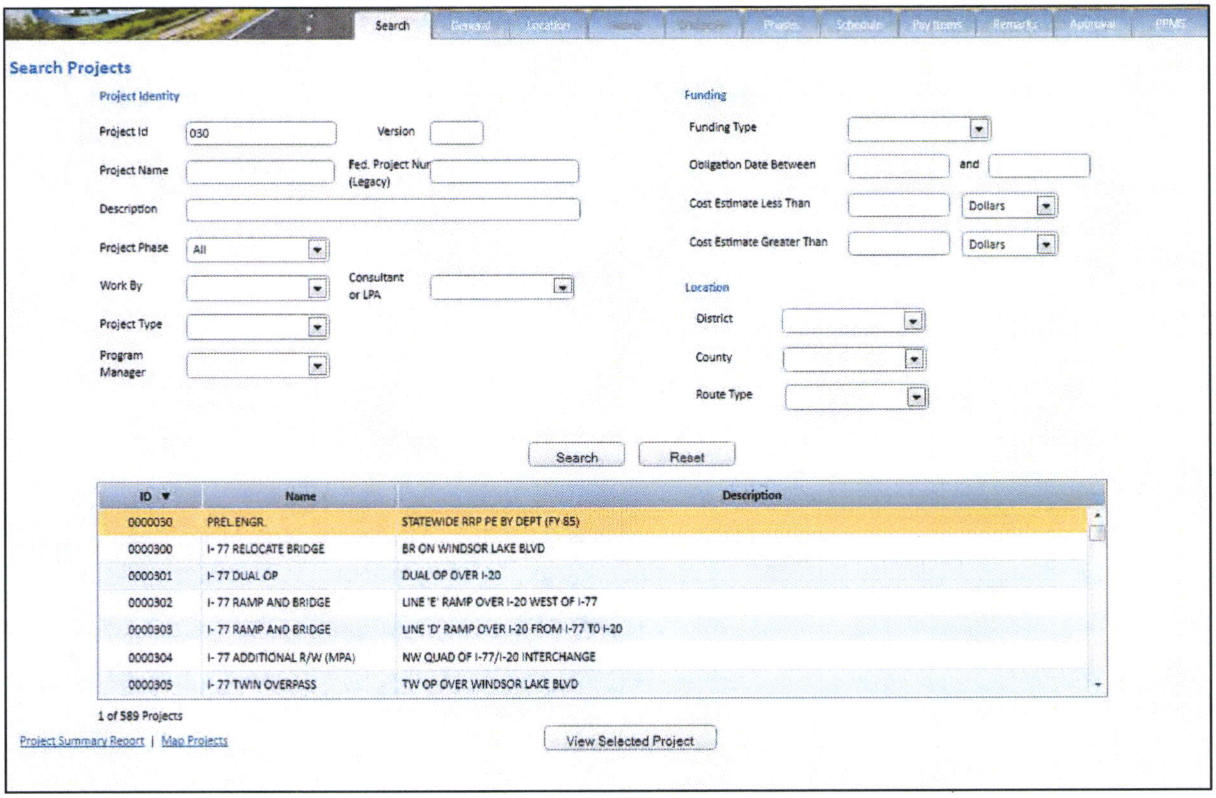


Figure 6 - The Project Search Screen

2.1 Search Tab

There are three main categories to perform a search on: **Project Identity, Funding,** and **Location**. Any search will be performed on the entered criteria after clicking the **Search** button. You can also reset the fields after performing a search by clicking the **Reset** button (adjacent to Search). *Note*: Wildcard searches will be performed with any entered data. I.e. if the user enters "3061" into the Project ID, P2S will display all projects with 3061 as part of their ID.

After searching, projects matching the criteria will be displayed below the *Search* and *Reset* buttons, as shown on the next page.

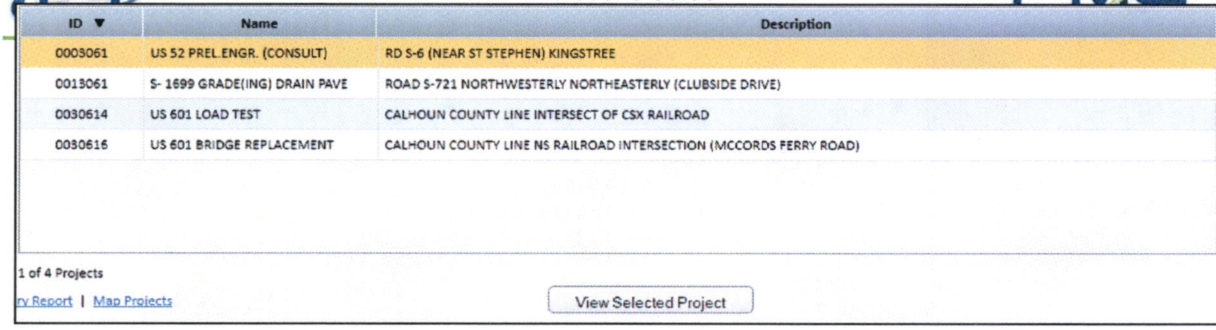


Figure 7 - Project Search Results

Select the project you were searching for from the displayed list and click **View Selected Project**. This will automatically take you to the tab containing the general information about the selected project, as shown below.

2.2 General Tab

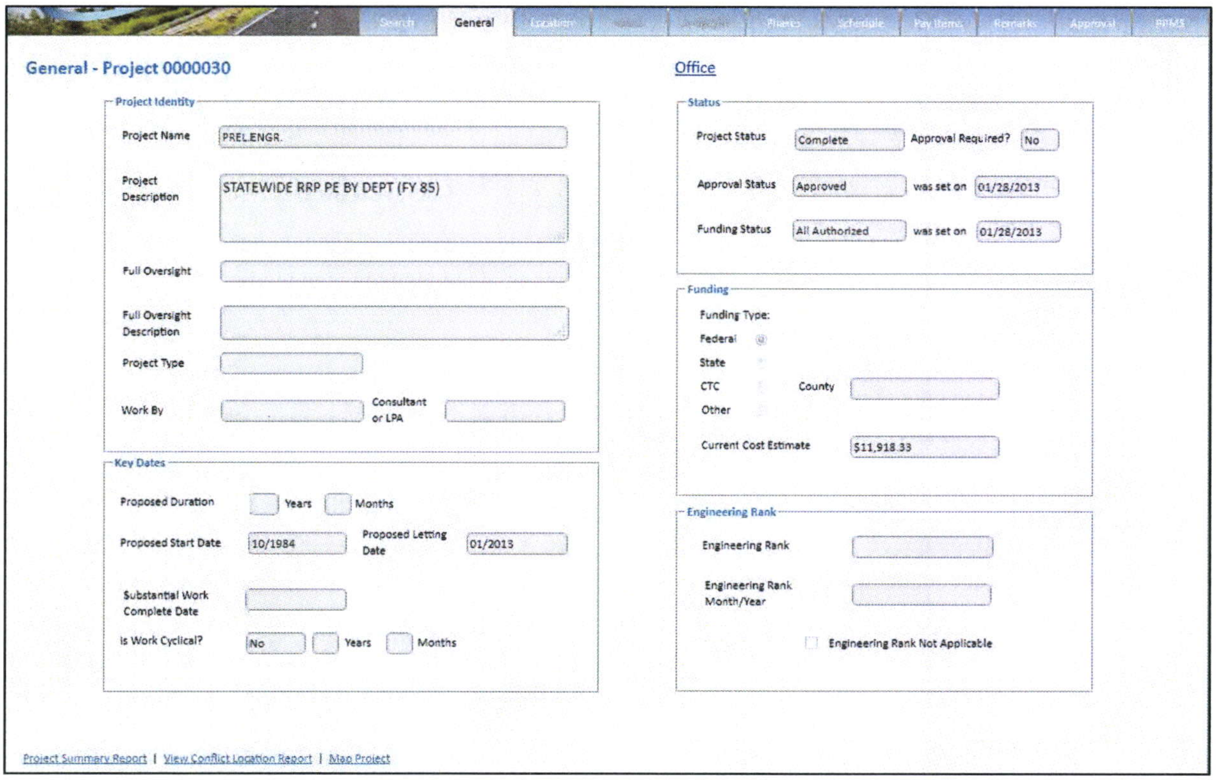


Figure 8 - Project General Information

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to either the **Project Plan** or the **Project Program** tab.

2.3 Location Tab

The **Location** tab contains several options for you to define the project location, as defined and display below.

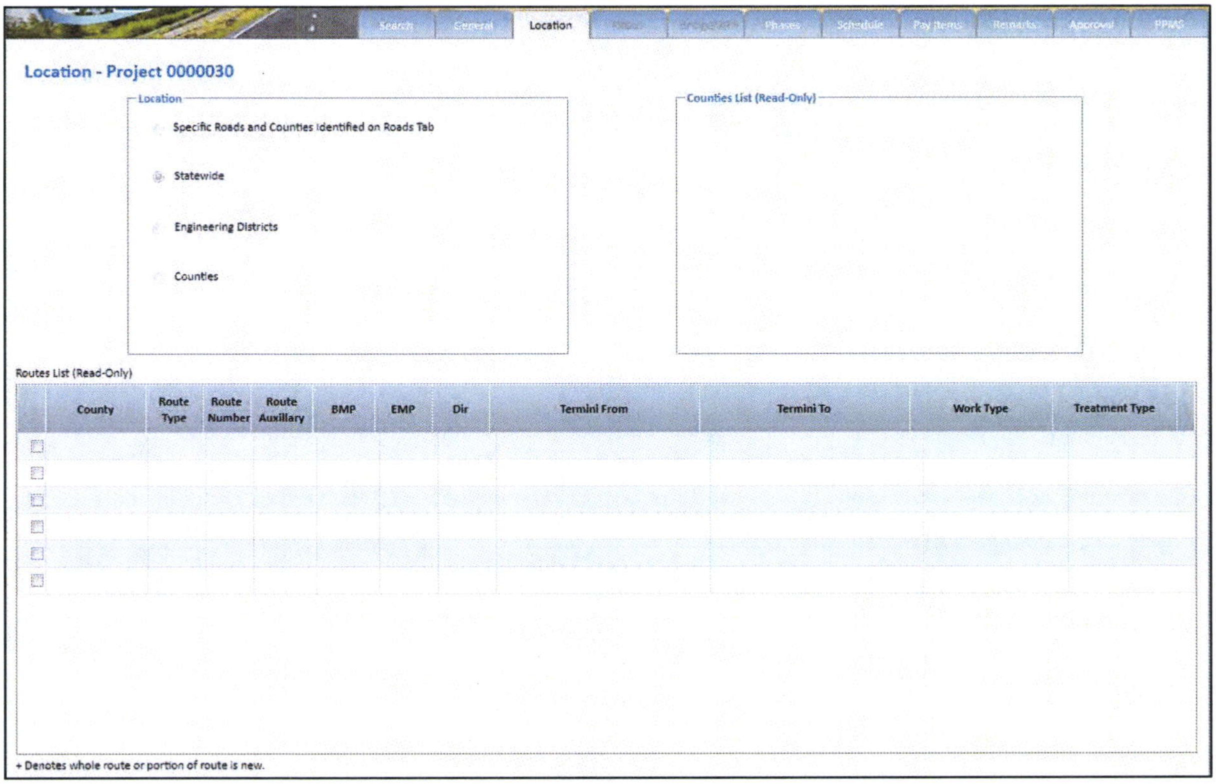


Figure 9 – Read Only Project Location

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to either the **Project Plan** or the **Project Program** tab.

2.4 Roads Tab

The **Roads** tab contains specific location information pertaining to the project.

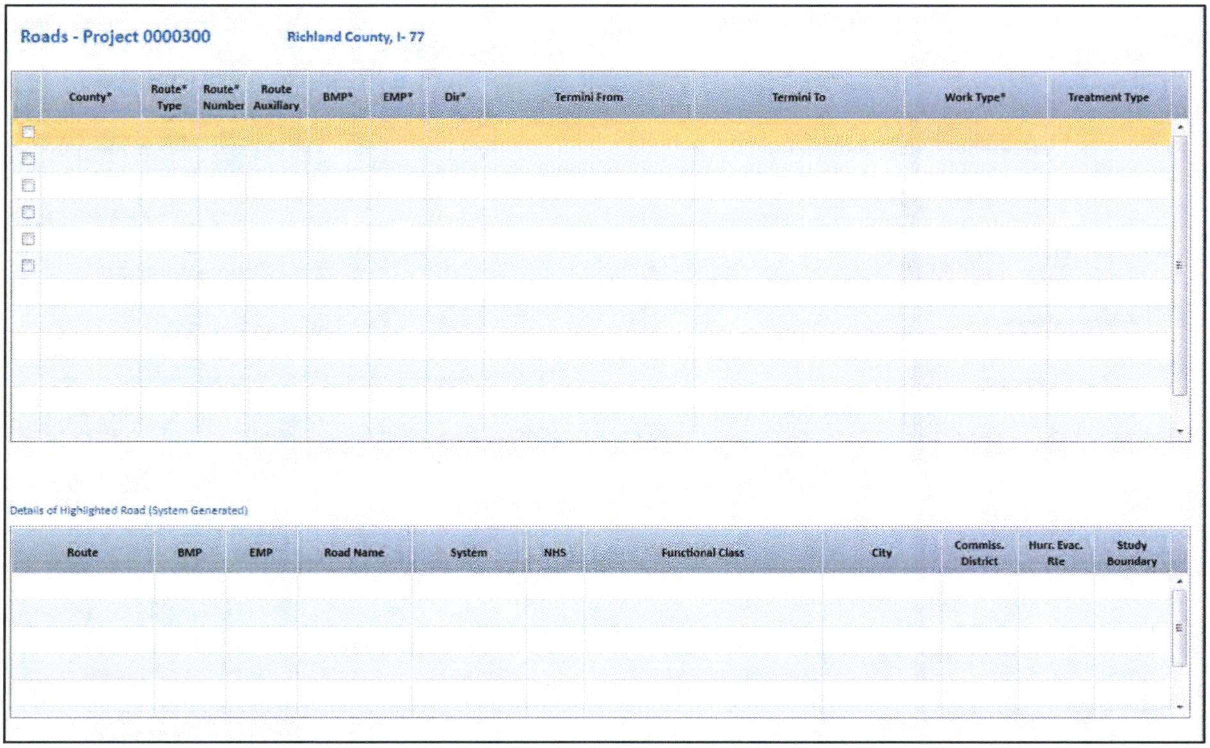


Figure 10 – Read Only Project Roads Information

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to either the **Project Plan** or the **Project Program** tab.

2.5 Bridge/RR Tab

The **Bridge/RR** tab contains specific location information pertaining to the project.

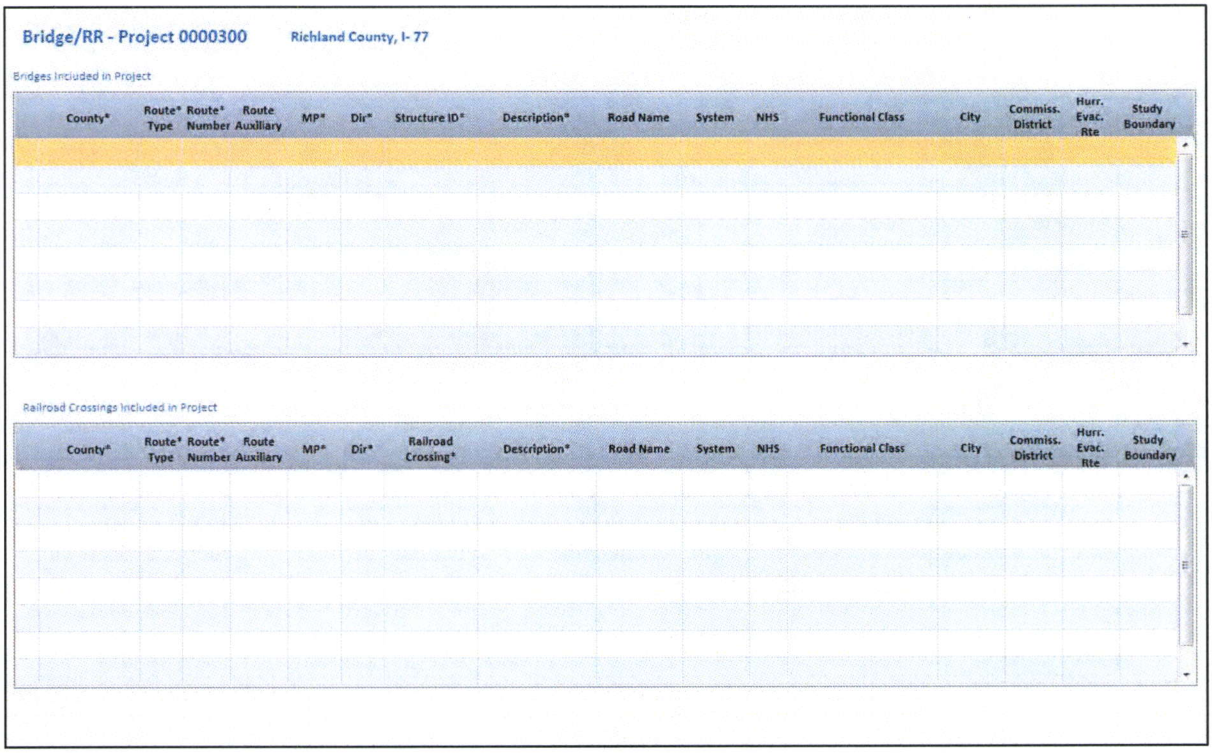


Figure 11 - Read Only Project Bridge/RR Information

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to either the **Project Plan** or the **Project Program** tab.

2.6 Phases Tab

At any point, you can expand any information on the rows available from the **Phases** screen by clicking the **+** at the beginning of the row.

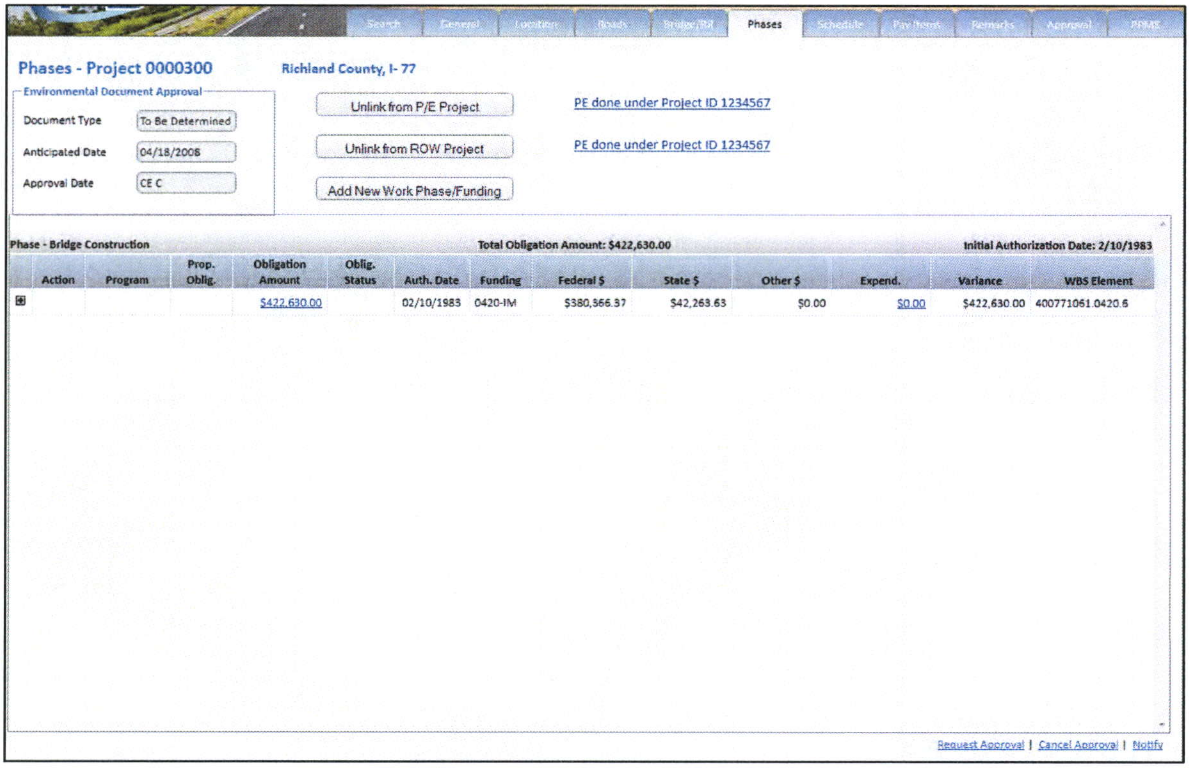


Figure 12 - Read Only Project Phases Information

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to either the **Project Plan** or the **Project Program** tab.

2.7 Schedule Tab

The **Schedule** tab contains schedule information for the activities associated with the project. The data on this tab will be retrieved from the Primavera P6 database based on the given Project ID. The information is obtained using an API provided by Primavera, and is displayed in read-only format.

Schedule - Project 0030616 **Multiple Locations, US 601**

Activity Name	Activity Status	Start	Finish	Physical %
P.E.				
Program Development	Completed	09/19/2003	09/19/2003	100%
⊞ Environmental	Active	12/16/2004	01/29/2010	0.02%
Preliminary Design	Completed	02/01/2005	03/01/2005	100%
Bridge Design	Active	02/28/2005	01/04/2010	0.02%
Hydrology	Active	03/03/2005	01/04/2010	0.02%
Traffic	Active	03/03/2005	01/04/2010	0.02%
Surveys	Completed	03/08/2005	03/01/2006	100%
Utilities	Not Started	01/04/2010	08/11/2014	0%
Road Design	Not Started	01/19/2010	01/19/2010	0%
⊞ ROW	Active	10/26/2005	01/04/2010	0.02%
Construction	Not Started	01/04/2010	04/07/2014	0%

Print | View in Excel

Figure 13 - Project Schedule Information

2.8 Pay Items Tab

P2S provides the ability to allow the input and modification of quantities and items required for a given project. The system calculates the cost of each item given this information. The screen shot below depicts this information in a read-only format.

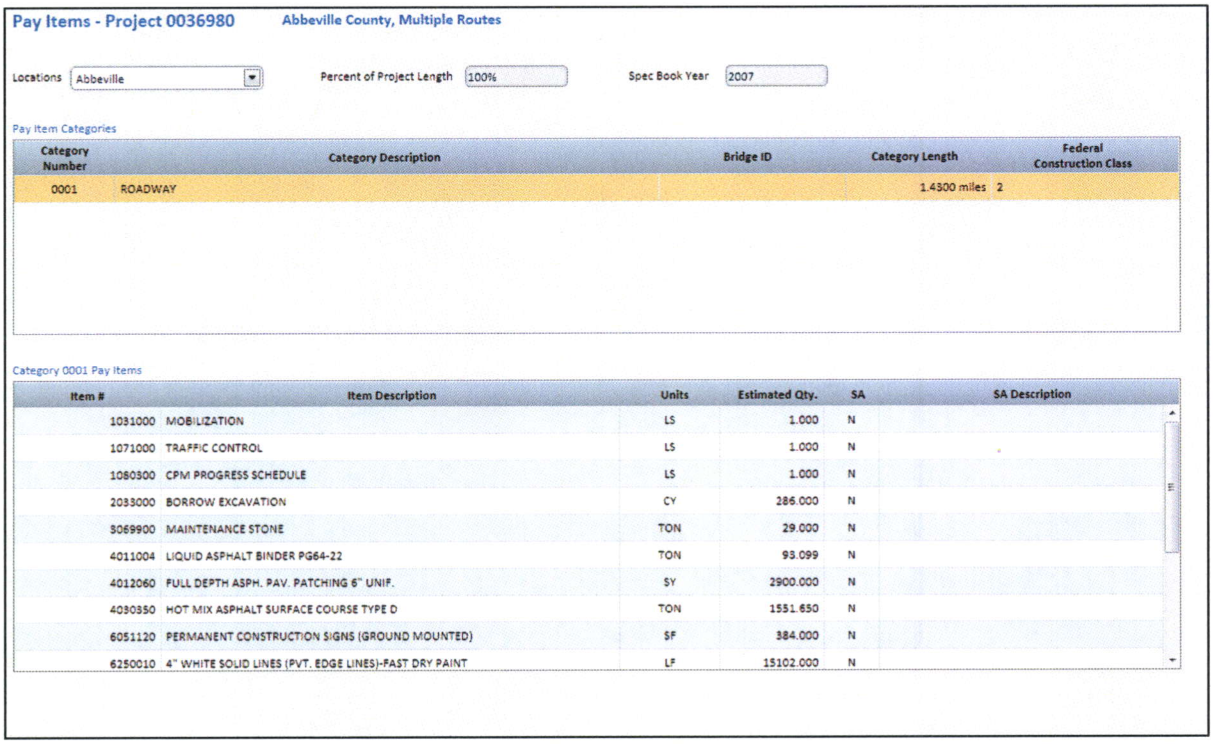


Figure 14 – Project Pay Items Tab

2.9 Remarks Tab

The **Remarks** tab provides a user with the ability to view all remarks previously entered by P2S system users for a project. The Remarks tab also provides a user with the ability to associate a remark to a project.

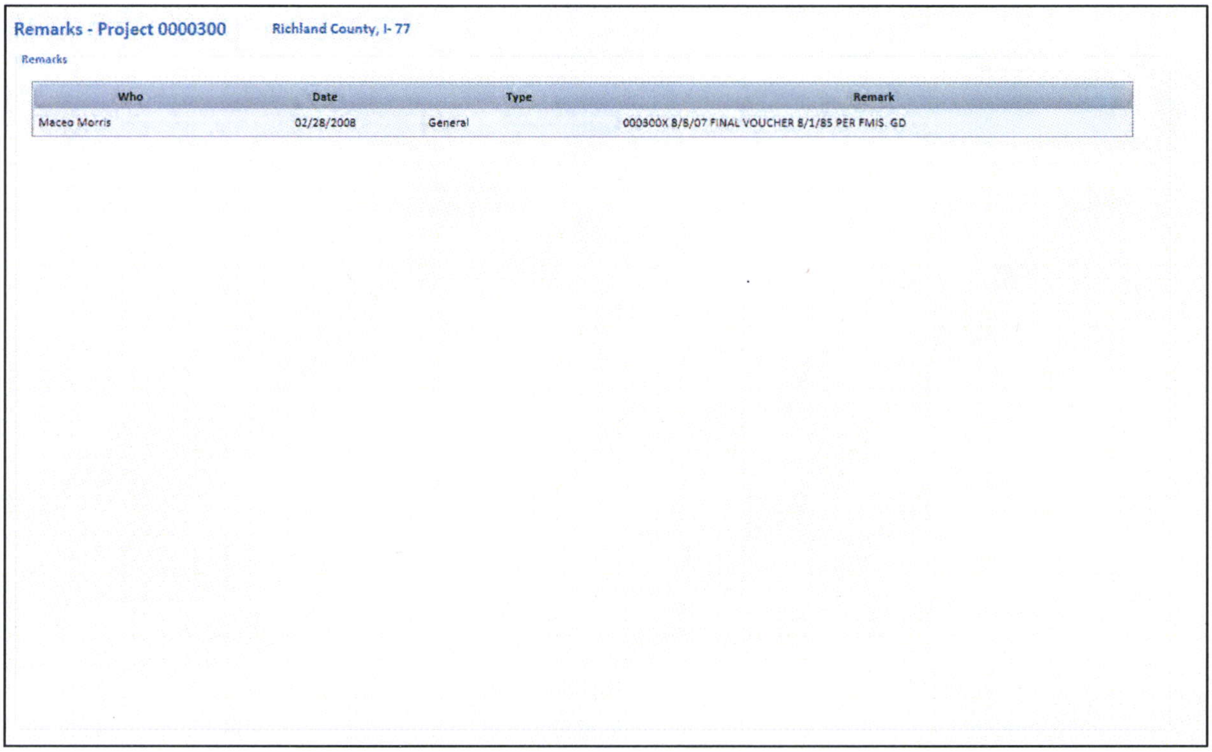
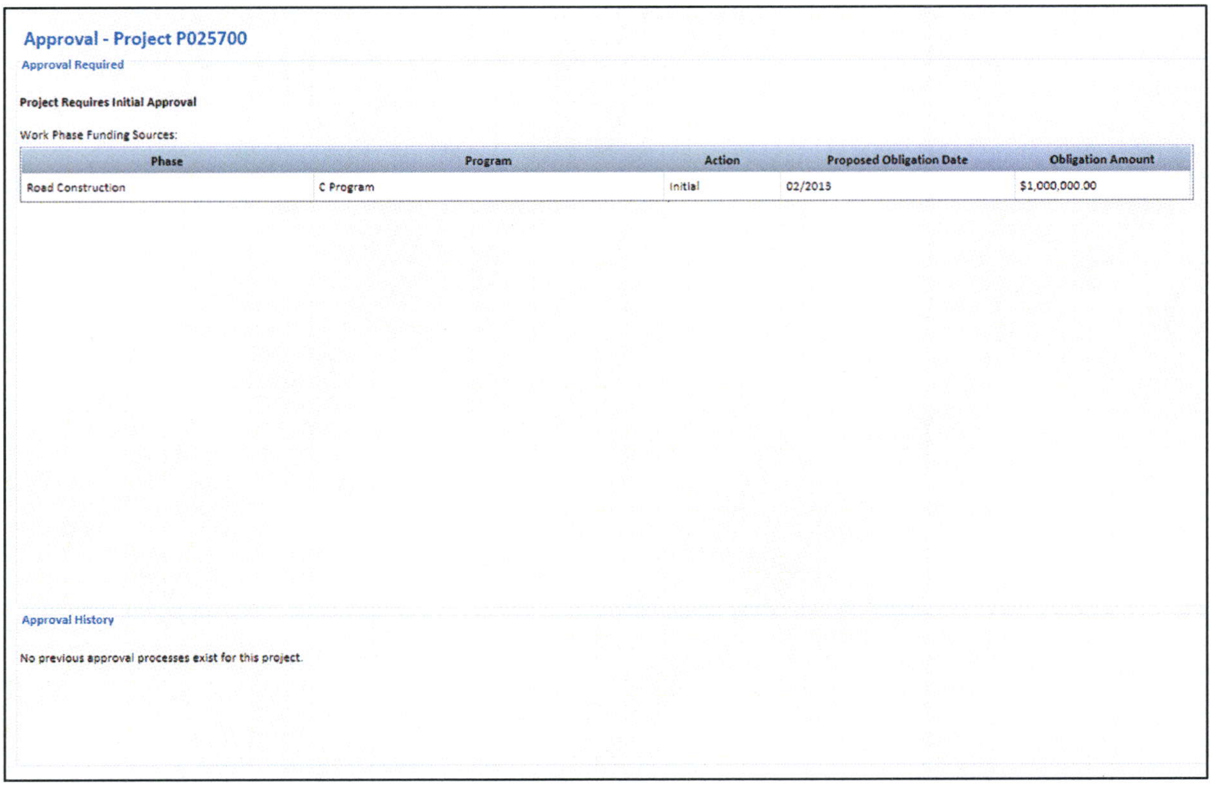


Figure 15 - Read Only Project Remarks

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to either the **Project Plan** or the **Project Program** tab.

2.10 Approvals Tab

During the life of a project in P2S, many changes will occur that require approval by DOT personnel having direct or indirect responsibility for the project.


Approval - Project P025700

Approval Required

Project Requires Initial Approval

Work Phase Funding Sources:

Phase	Program	Action	Proposed Obligation Date	Obligation Amount
Road Construction	C Program	Initial	02/2013	$1,000,000.00

Approval History

No previous approval processes exist for this project.

Figure 16 - Project Approvals Information

2.11 PPMS Tab

The **PPMS** tab contains legacy identifying information about projects originating from PPMS. Whereas the PPMS system was "work phase" driven, the P2S system is "project" driven. As such, P2S no longer creates the same identifying information such as project suffix, file number, etc. However, so that users of the P2S system can still query and locate information by the legacy ID information, much of this data has been retained for viewing purposes only. The **PPMS** tab will only be visible for projects which once existed in PPMS. The data is presented in a read-only format.

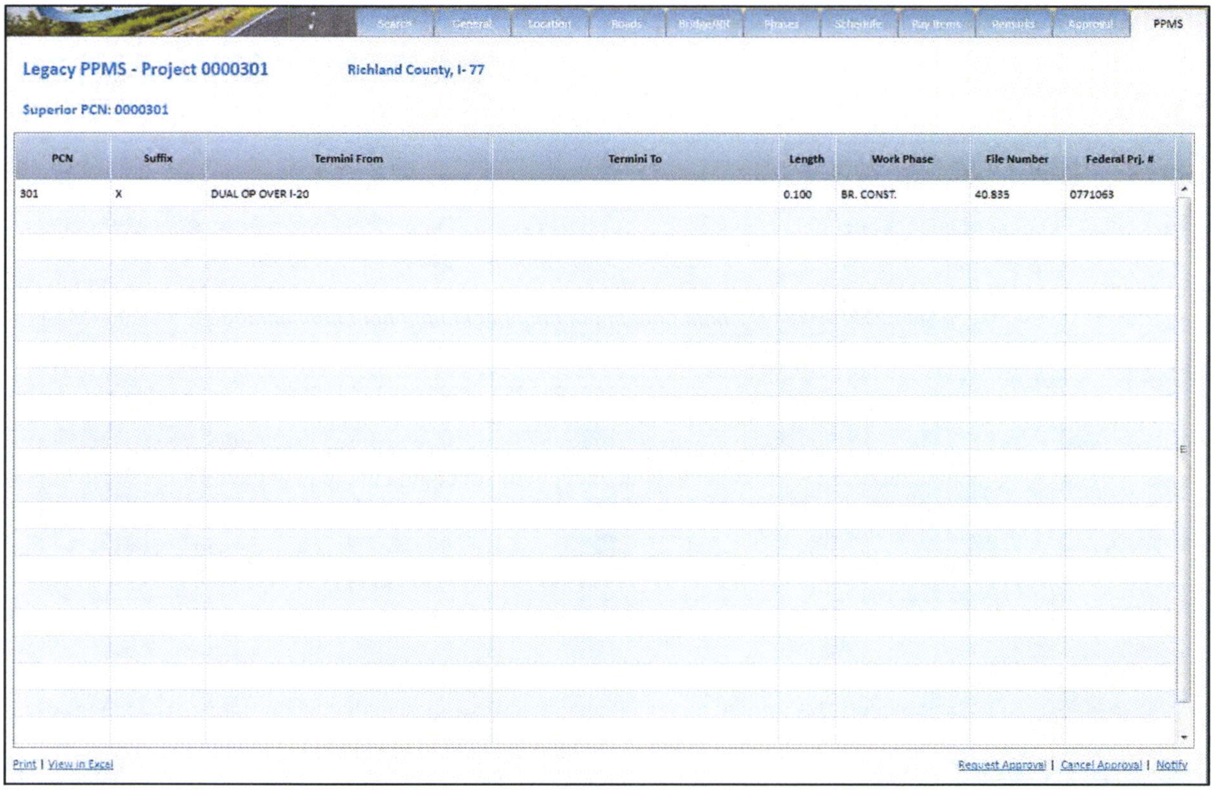


Figure 17 - Project PPMS Information

3. Search – Contracts

The **Search** tab can be used to find project or contract information. This section will focus on searching for contract information.

3.1 Search Tab

Similarly to searching for project information, you need only to enter the information you wish to search for in the corresponding fields and click **Search**. A list of contracts corresponding to the criteria will be displayed. Similarly to the **Project** search screen, the **Contract** search will perform wildcard searches. I.e. if the user enters "3061" into the **Project ID** field, P2S will display all projects with 3061 as part of their ID.

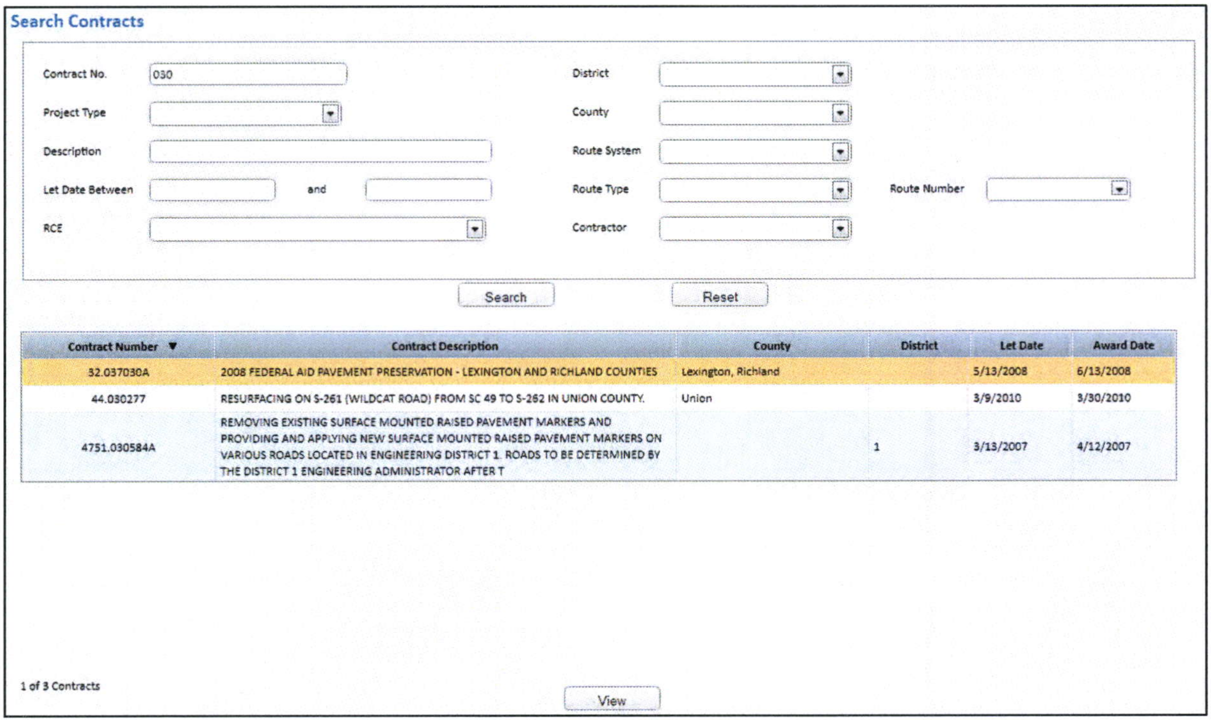


Figure 18 - Contract Search Screen

If the desired contract appears in the list, click **View** to view the selected contract. You will be redirected to the general information screen for this contract, as shown below. If your desired contract does not appear, you may need to reconsider your search criteria.

3.2 General Tab

Current Completion Date

To view more information about the current completion date than is shown in the field, you may click **Current Completion Date** to be redirected to the **Chg Orders** screen, which is discussed further down in this section.

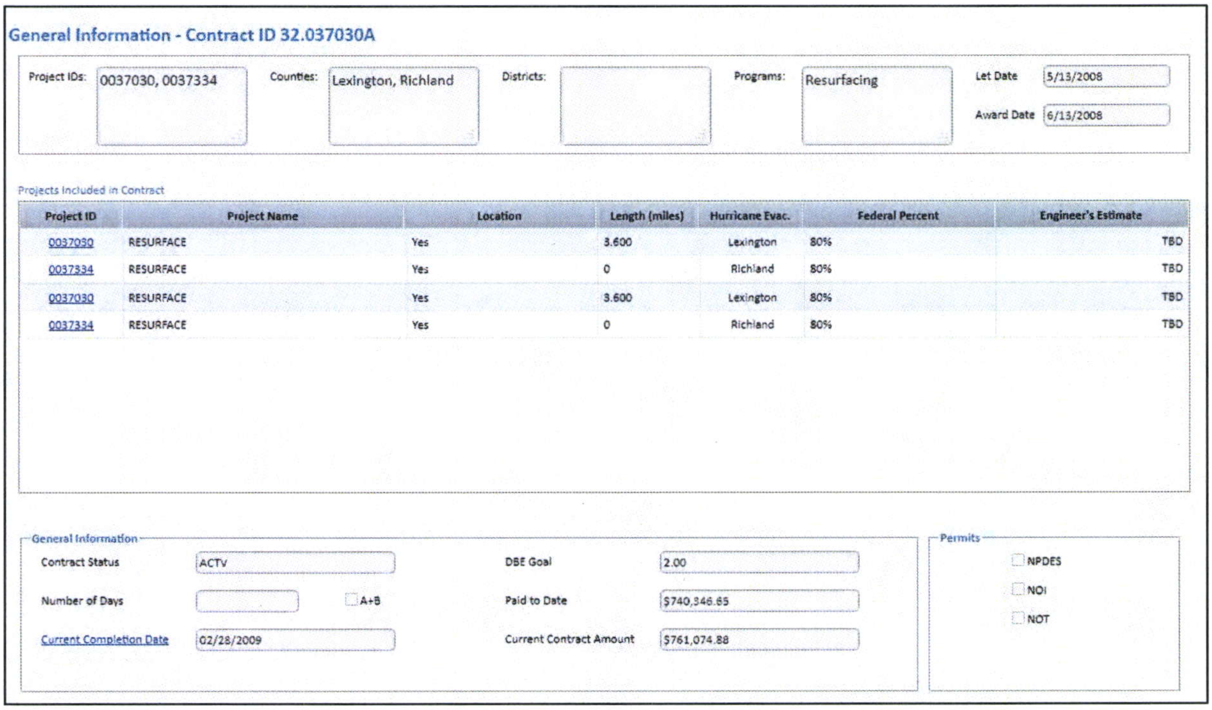
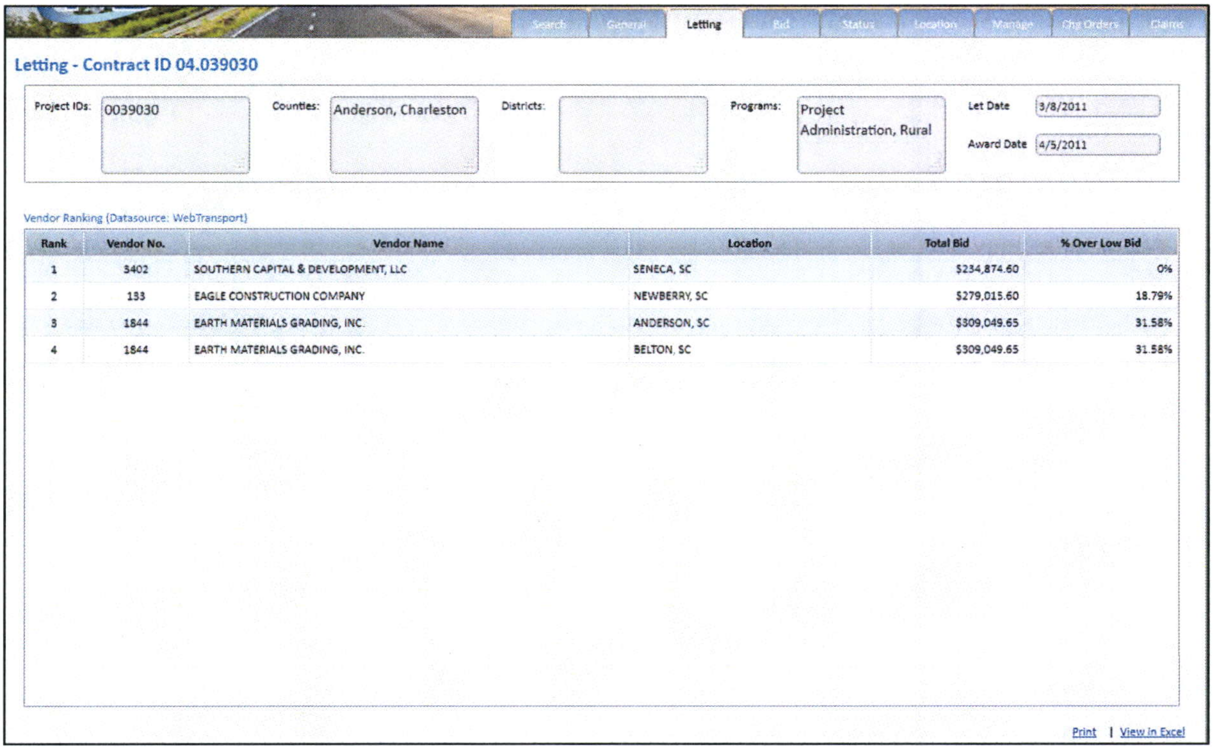


Figure 19 - Contract General Information

3.3 Letting Tab

The **Letting** tab lists information about the vendors that bid on the contract and their bid amounts. The textboxes and data table on this screen contain read-only information retrieved from Web Trns*port. The letting and award dates are shown above the table. The table lists each vendor and their total bid amount. The lowest bid is ranked first and placed at the top of the list. Each successively higher bid is listed below it along with the percent it goes over the lowest bid.

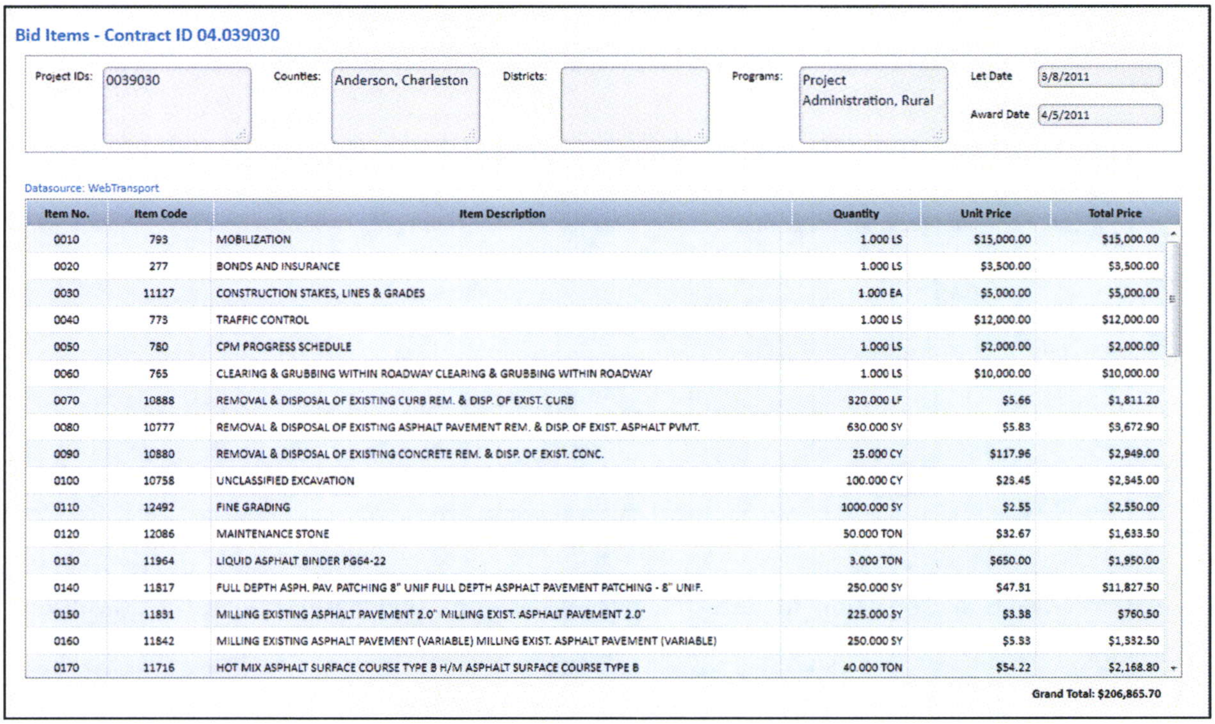


Rank	Vendor No.	Vendor Name	Location	Total Bid	% Over Low Bid
1	3402	SOUTHERN CAPITAL & DEVELOPMENT, LLC	SENECA, SC	$234,874.60	0%
2	133	EAGLE CONSTRUCTION COMPANY	NEWBERRY, SC	$279,015.60	18.79%
3	1844	EARTH MATERIALS GRADING, INC.	ANDERSON, SC	$309,049.65	31.58%
4	1844	EARTH MATERIALS GRADING, INC.	BELTON, SC	$309,049.65	31.58%

Figure 20 - Contract Letting Information

3.4 Bid Items Tab

The **Bid Items** tab lists the estimates of the prices for materials that will be used under the contract. The pay items listed on this tab will list combined estimates for identical item numbers for each project. This screen contains read-only information retrieved from Web Trns*port. It lists all of the pay items, their estimated quantities and estimated costs. These amounts are summed to reach the total estimate. This screen is displayed below.


Bid Items - Contract ID 04.039030

Project IDs: 0039030
Counties: Anderson, Charleston
Districts:
Programs: Project Administration, Rural
Let Date: 3/8/2011
Award Date: 4/5/2011

Datasource: WebTransport

Item No.	Item Code	Item Description	Quantity	Unit Price	Total Price
0010	793	MOBILIZATION	1.000 LS	$15,000.00	$15,000.00
0020	277	BONDS AND INSURANCE	1.000 LS	$3,500.00	$3,500.00
0030	11127	CONSTRUCTION STAKES, LINES & GRADES	1.000 EA	$5,000.00	$5,000.00
0040	773	TRAFFIC CONTROL	1.000 LS	$12,000.00	$12,000.00
0050	780	CPM PROGRESS SCHEDULE	1.000 LS	$2,000.00	$2,000.00
0060	765	CLEARING & GRUBBING WITHIN ROADWAY CLEARING & GRUBBING WITHIN ROADWAY	1.000 LS	$10,000.00	$10,000.00
0070	10888	REMOVAL & DISPOSAL OF EXISTING CURB REM. & DISP. OF EXIST. CURB	320.000 LF	$5.66	$1,811.20
0080	10777	REMOVAL & DISPOSAL OF EXISTING ASPHALT PAVEMENT REM. & DISP. OF EXIST. ASPHALT PVMT.	630.000 SY	$5.83	$3,672.90
0090	10880	REMOVAL & DISPOSAL OF EXISTING CONCRETE REM. & DISP. OF EXIST. CONC.	25.000 CY	$117.96	$2,949.00
0100	10758	UNCLASSIFIED EXCAVATION	100.000 CY	$28.45	$2,845.00
0110	12492	FINE GRADING	1000.000 SY	$2.55	$2,550.00
0120	12086	MAINTENANCE STONE	50.000 TON	$32.67	$1,633.50
0130	11964	LIQUID ASPHALT BINDER PG64-22	3.000 TON	$650.00	$1,950.00
0140	11817	FULL DEPTH ASPH. PAV. PATCHING 8" UNIF FULL DEPTH ASPHALT PAVEMENT PATCHING - 8" UNIF.	250.000 SY	$47.31	$11,827.50
0150	11831	MILLING EXISTING ASPHALT PAVEMENT 2.0" MILLING EXIST. ASPHALT PAVEMENT 2.0"	225.000 SY	$3.38	$760.50
0160	11842	MILLING EXISTING ASPHALT PAVEMENT (VARIABLE) MILLING EXIST. ASPHALT PAVEMENT (VARIABLE)	250.000 SY	$5.33	$1,332.50
0170	11716	HOT MIX ASPHALT SURFACE COURSE TYPE B H/M ASPHALT SURFACE COURSE TYPE B	40.000 TON	$54.22	$2,168.80

Grand Total: $206,865.70

Figure 21 - Contract Bid Items Information

3.5 Status Tab

The **Status** tab shows detailed information about the dates and amounts associated with the contract.

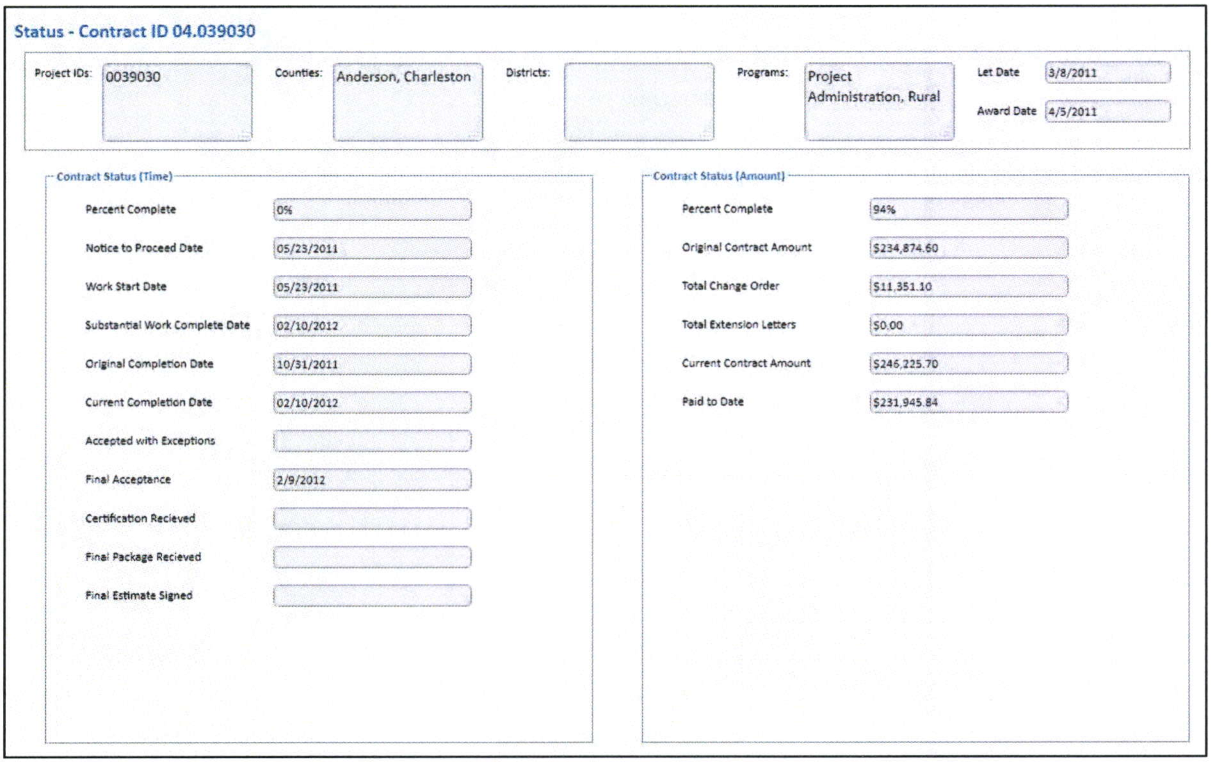


Figure 22 - Contract Status Information

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to the **Modify Contracts** tab.

3.6 Locations Tab

The **Location** tab shows detailed information about the dates and amounts associated with the contract. The information on this tab is retrieved from the P2S database and is read-only.

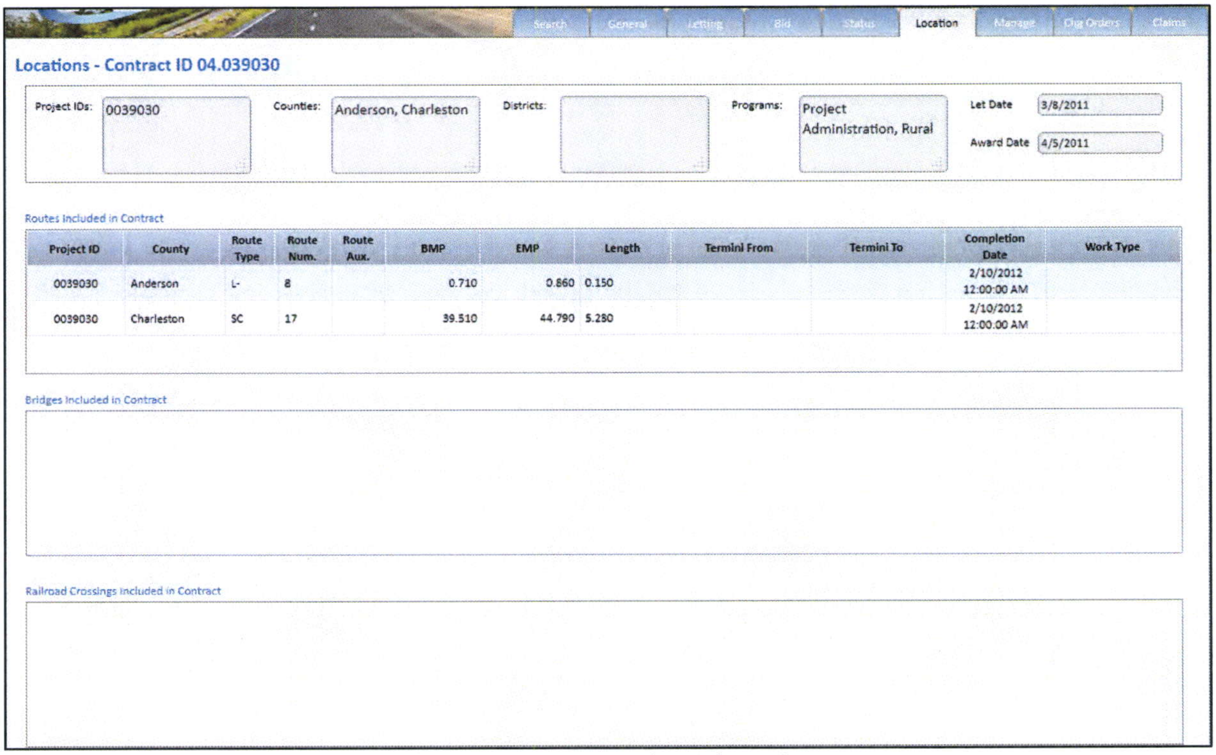


Figure 23 - Contract Locations Information

3.7 Management Tab

The **Management** tab shows information about the resident construction and resident maintenance engineers for the contract.

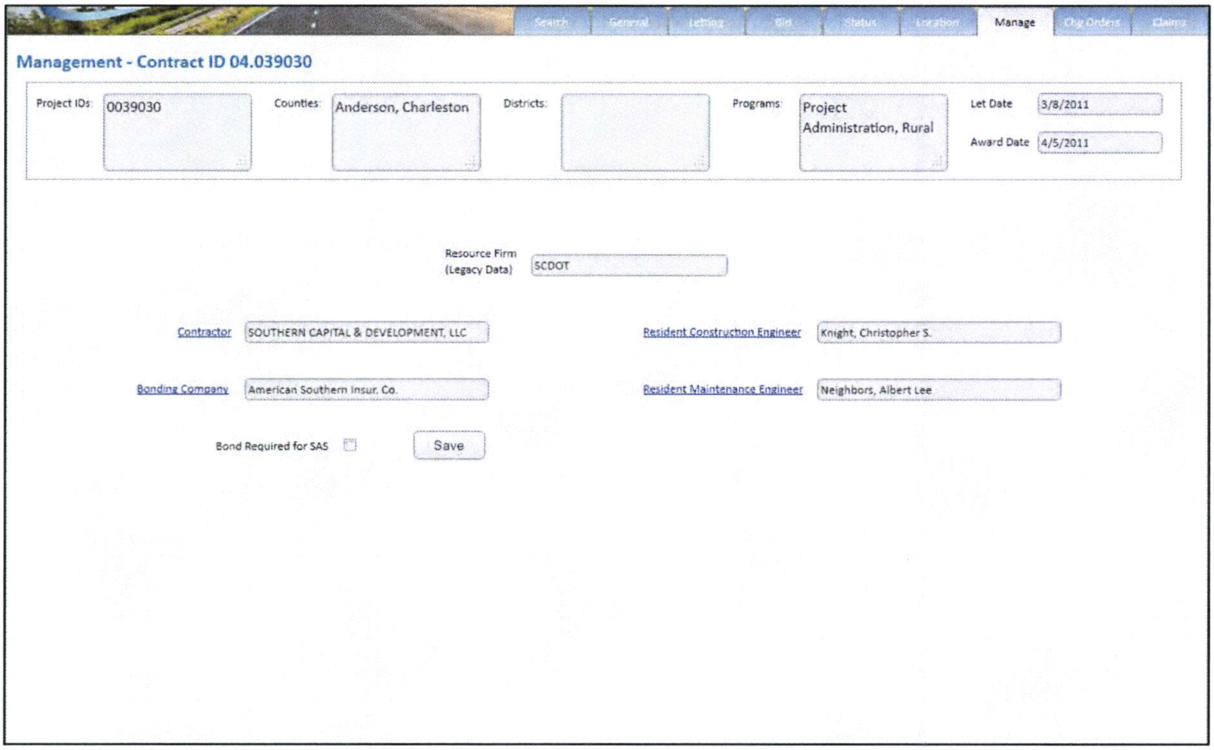


Figure 24 - Contract Management Information

Viewing Contractor Information: To view information about the contractor, such as the contractor name, street address, city, state, and zip, click the Contractor button.

Viewing Bonding Company Information: To view information about the bonding company, such as the bonding company name, streed address, city, state, and zip, click the Bonding Company button.

Viewing Resident Construction Engineer Information: To view information about the resident construction engineer, such as the resident construction engineer name, street, city, state, zip code, work phone number, or cell phone number, click the Resident Construction Engineer button.

Viewing Resident Maintenance Engineer Information: To view information about the reisdent manintenance engineer, such as the resident maintenance engineer name, street, city, state, zip code, work phone number, or cellphonr number, click the Resident Maintenance Engineer button.

3.8 Change Orders Tab

The Change Orders tab shows a list of all of the change orders that have been applied to the contract. This tab replaces the "Open SA" and "Open CMR" links that were in the old card file interface.

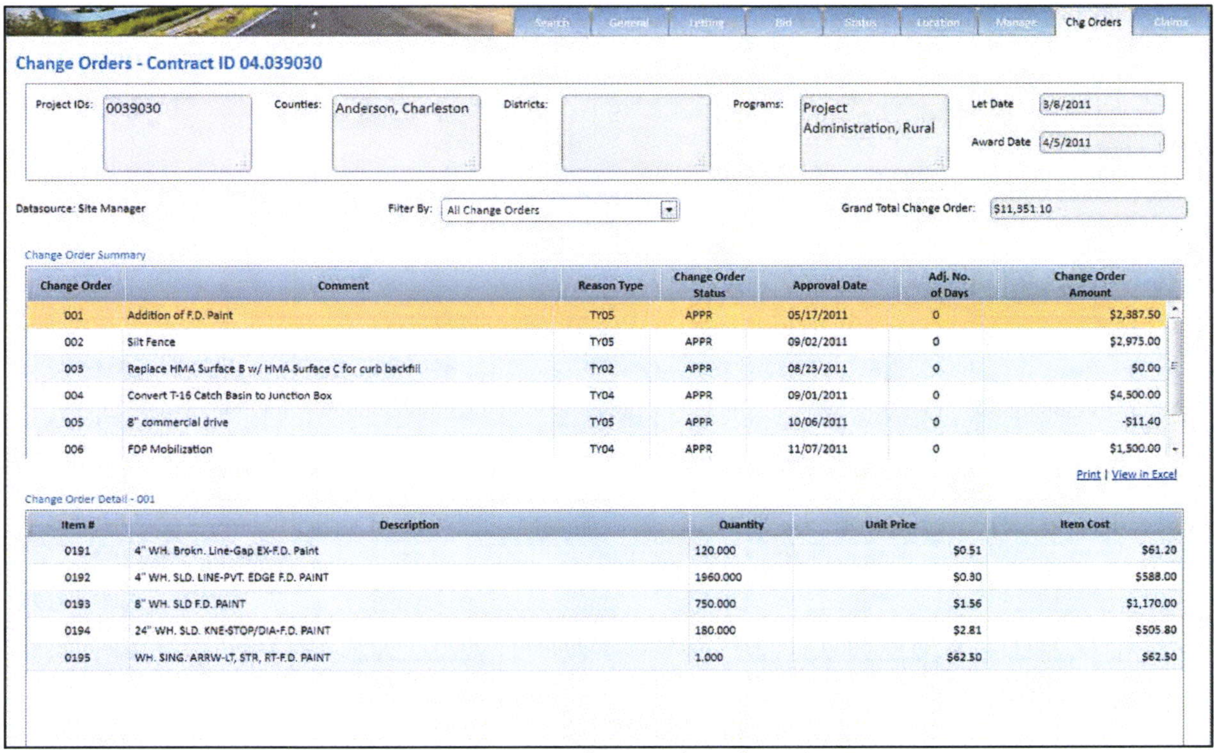


Figure 25 - Contract Change Orders Information

Filtering Results: Located above the **Change Order Summary** table is a drop-down menu that allows you to filter any displayed results. You have the option to filter your results by **Has Cost Adjustments, Has Time Adjustments, Has Cost and Time Adjustments**, or **All Change Orders**.

Viewing Change Order Detail: Clicking any order within the *Change Order Summary* table will cause that order to be viewed in more detail in the table below, *Change Order Detail*.

3.9 Claims Tab

The **Claims** tab will provide the ability to view information pertaining to contract claims.

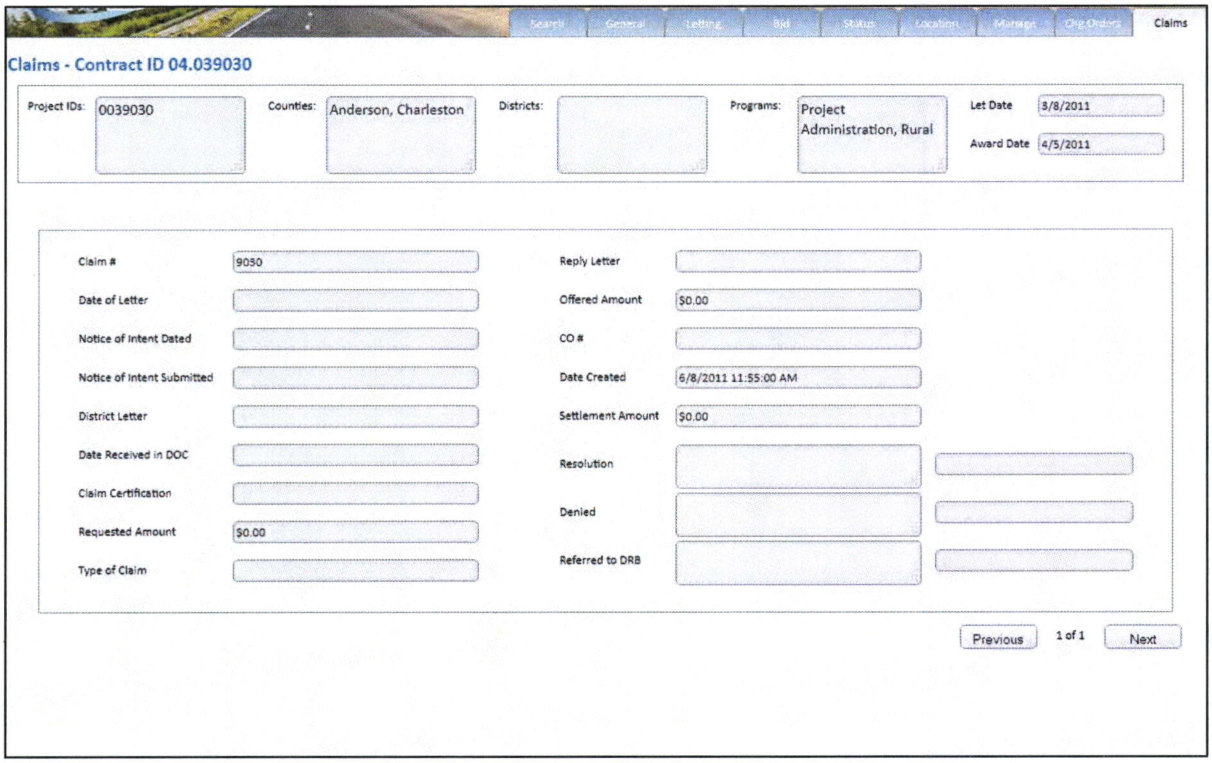


Figure 26 - Contract Claims Information

Note: This screen is read only from the **Search** screen. If you wish to modify any of these fields, you will need to go to the **Modify Contracts** tab.

4. Projects – Plan

When a project is planned, particulars regarding the project are captured and logged into the system. The **Project Plan** tab allows you to search for and modify existing projects, or start planning a new project.

4.1 Search Tab

Planning an Existing Project: The project plan search page is used in a similar way as the **Search** tab's search page. Enter in the desired criteria under the correct fields, and click **Search**. The difference between the **Search** tab's page and the Project's search are the **Plan New Project** and **Plan Selected Project** buttons.

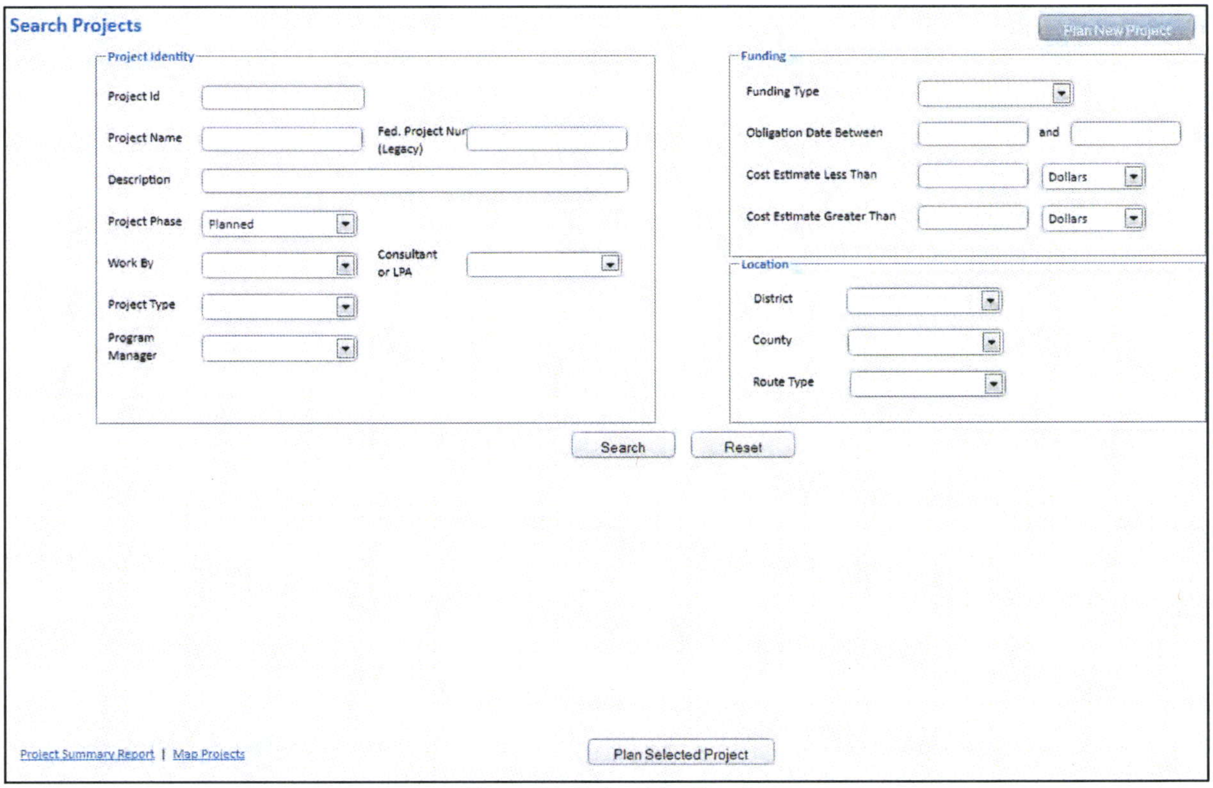


Figure 27 - Project Plan Search

Note: The **Plan Selected Project** button can only be used after search criteria have been entered, **Search** has been clicked, and you have selected the project you wish to plan.

Plan a new Project: When you choose to plan a new project, clicking the **Plan New Project** button will take you to the **General** tab in which you can enter information about the project you are planning. This tab is displayed on the next page.

4.2 General Tab

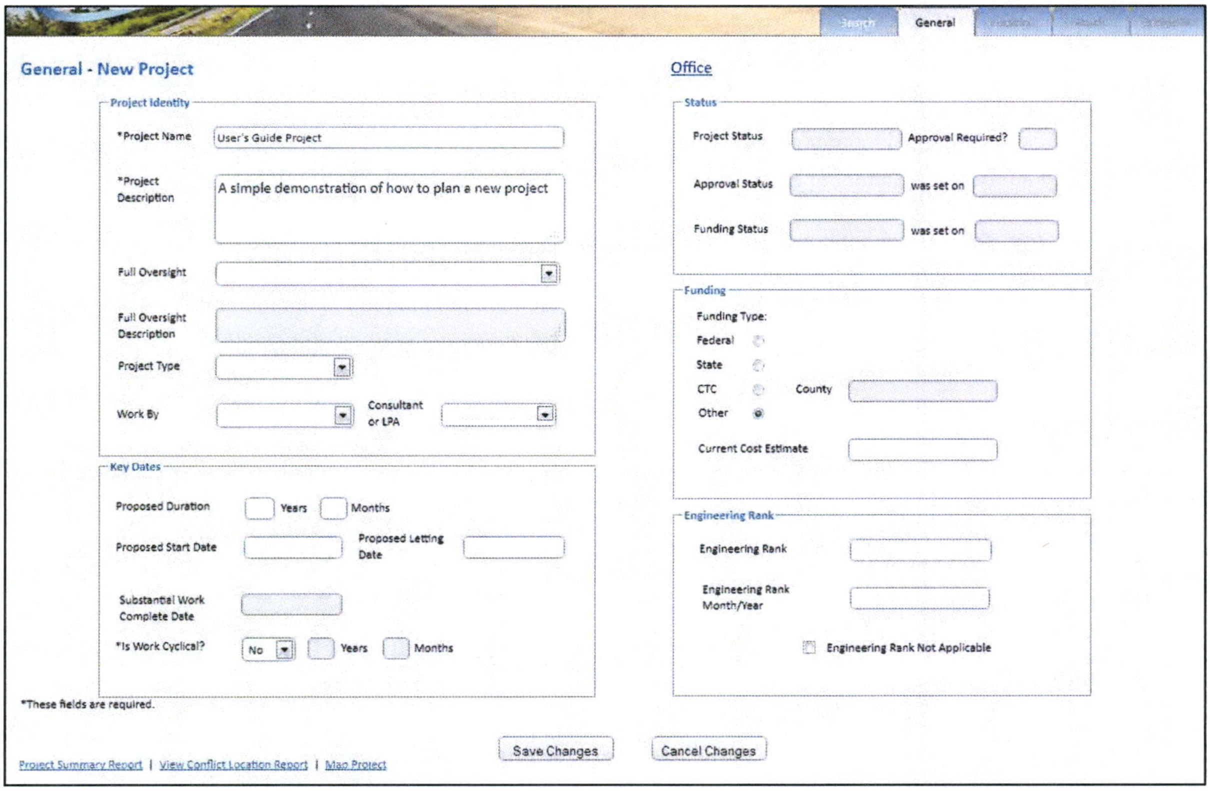


Figure 28 - Project Plan General Tab

At a minimum, you will need to enter data in each field marked with an asterisk (**Project Name, Project Description, Is Work Cyclical?**), although it is recommended that enough identifying information is entered to assist users in easily locating the planned project from a search. A unique Project ID will be generated and assigned by the system when the project is saved for the first time.

After the project has been saved, some **Status** and **Funding** information will be filled in. You may also click the **Office** button located above the **Status** fields, which will now have information stored.

4.3 Location Tab

The **Location** tab contains several options for you to define the project location, as defined and display below.

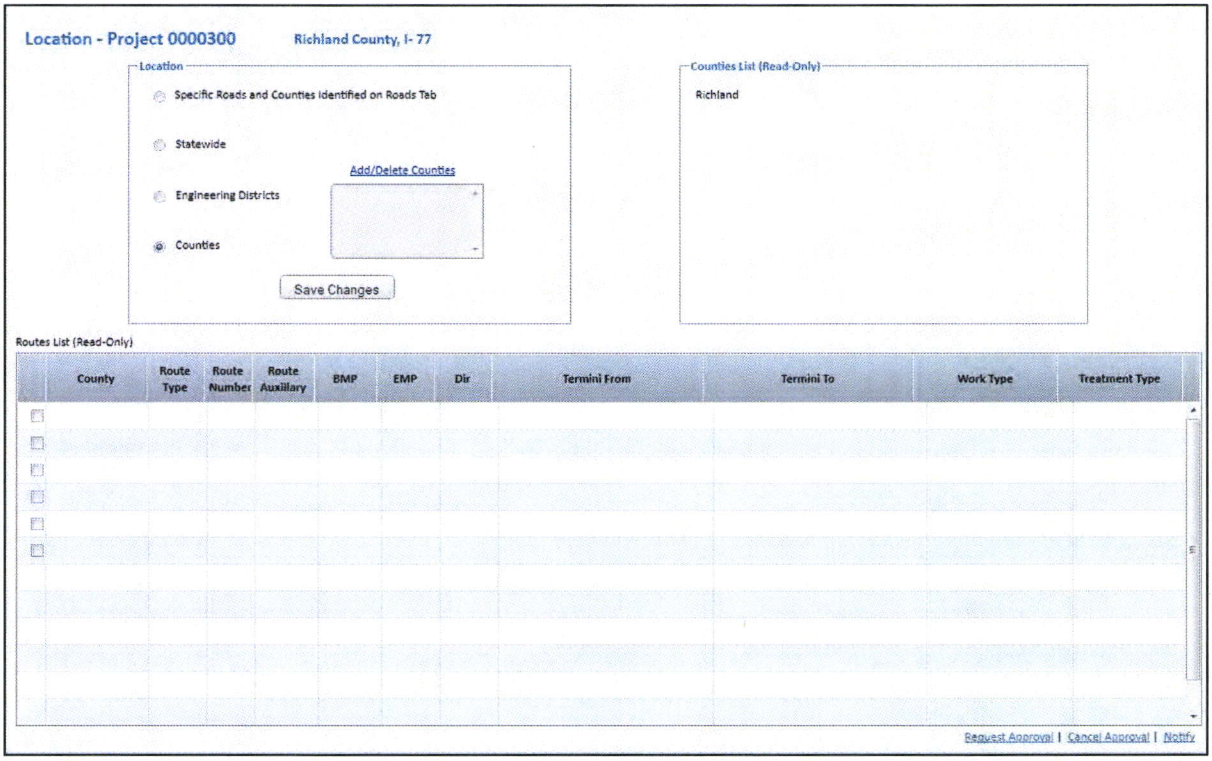


Figure 29 - Project Plan Location Tab

Specific Roads and Counties Identified on Roads Tab: This option allows you to enter the project counties and routes on the **Roads** tab.

Statewide: This option is available for defining the general area of a project when parts of it lay in different areas of the state. If this option is chosen, the **Roads** tab in P2S will be disabled.

Engineering Districts: This option allows the user to define one or more engineering districts as the project location. If this option is chosen, the **Roads** tab in P2S will be disabled.

Counties: This option allows the user to define one or more counties as the project location. If this option is chosen, the **Roads** tab in P2S will be disabled. Selecting this option will also bring up the **Add/Delete Counties** interface. When this link is clicked, you may select the districts to be used in the project.

4.4 Roads Tab

Adding a Road: When you first navigate to the **Roads** tab, there will only be one row enabled in the table. At any point after filling in the first 6 columns, you may press the **Refresh Details** button to see details about the road section in the table at the bottom of the screen. Changes may be made by editing a field and clicking the **Save** button. *Note:* A second row will only be enabled after the first row has met the proper criteria.

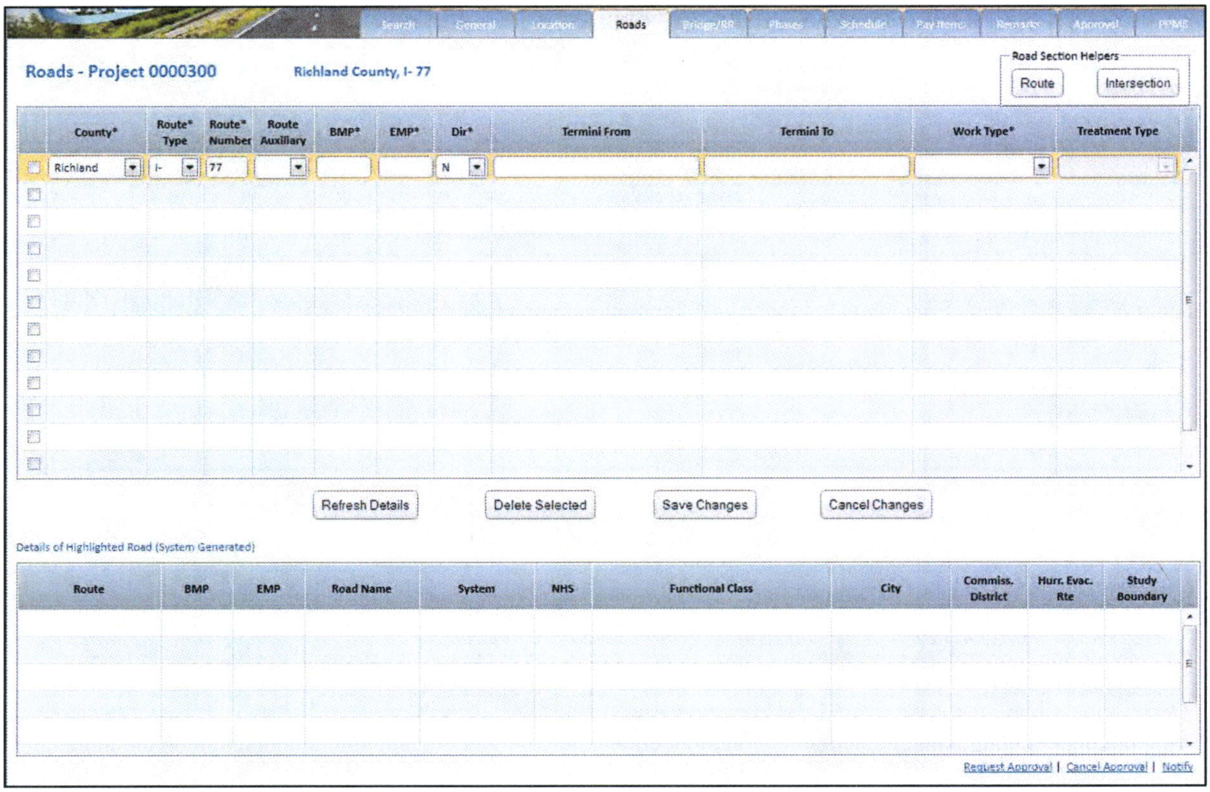


Figure 30 - Project Plan Roads Tab

There are two buttons located at the top right of the above image that can assist you in selecting either roads or intersections to add. If you want to add a new route based on either criterion, click the **Route** or **Intersection** button, depending on the necessity.

Route Helper: Clicking the **Route** button will cause the interface displayed below to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Routes** to transfer these routes into the **Roads** display. *Note:* The **Region** field requires an option to be selected in order for the search to work.

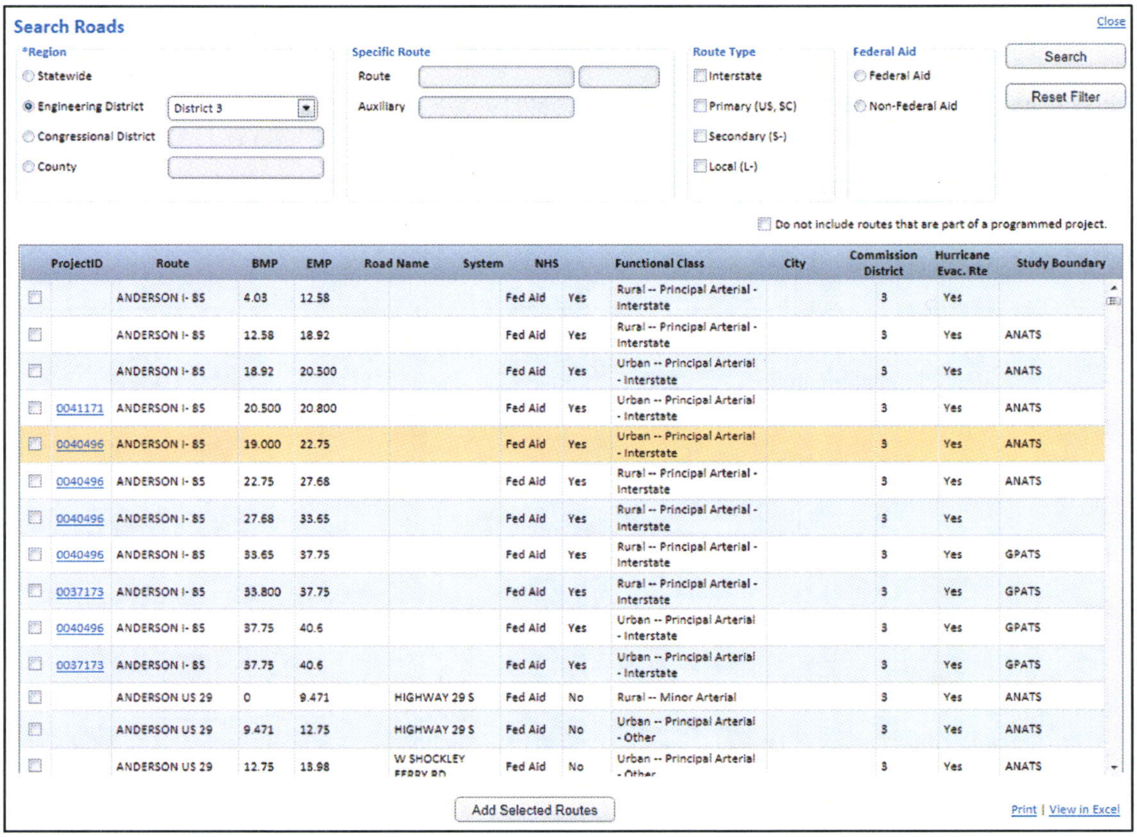


Figure 31 - Project Plan Route Helper

Intersection Helper:

Clicking the **Intersection** button will cause the interface displayed on the right to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Routes** to transfer these routes into the **Roads** display. *Note:* The **County** and **Route** fields are required for the search to work.

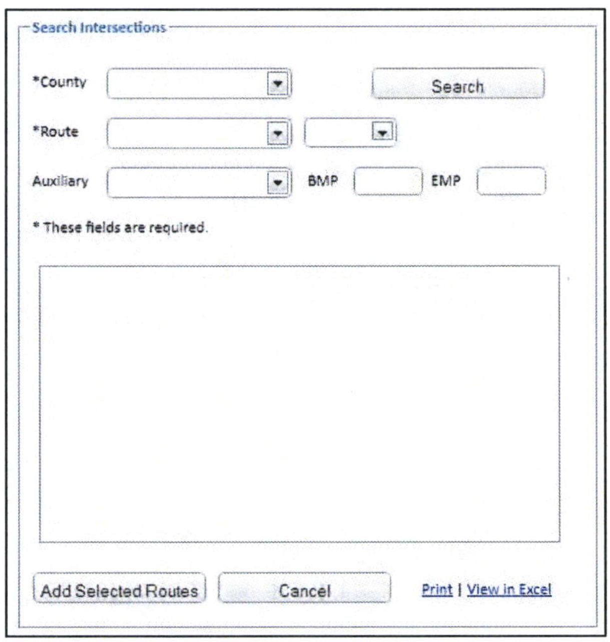


Figure 32 - Project Plan Intersection Helper

4.5 Bridge/RR Tab

Adding a Bridge: When you first navigate to the **Bridge/RR** tab, there will be one row enabled in the table. At any point after filling in the first 5 columns of the **Bridge** table, you may press the **Refresh Details** button to see details about the road section in the table at the bottom of the screen. Changes may be made by editing a field and clicking the **Save** button. *Note:* A second row will only be enabled after the first row has met the proper criteria.

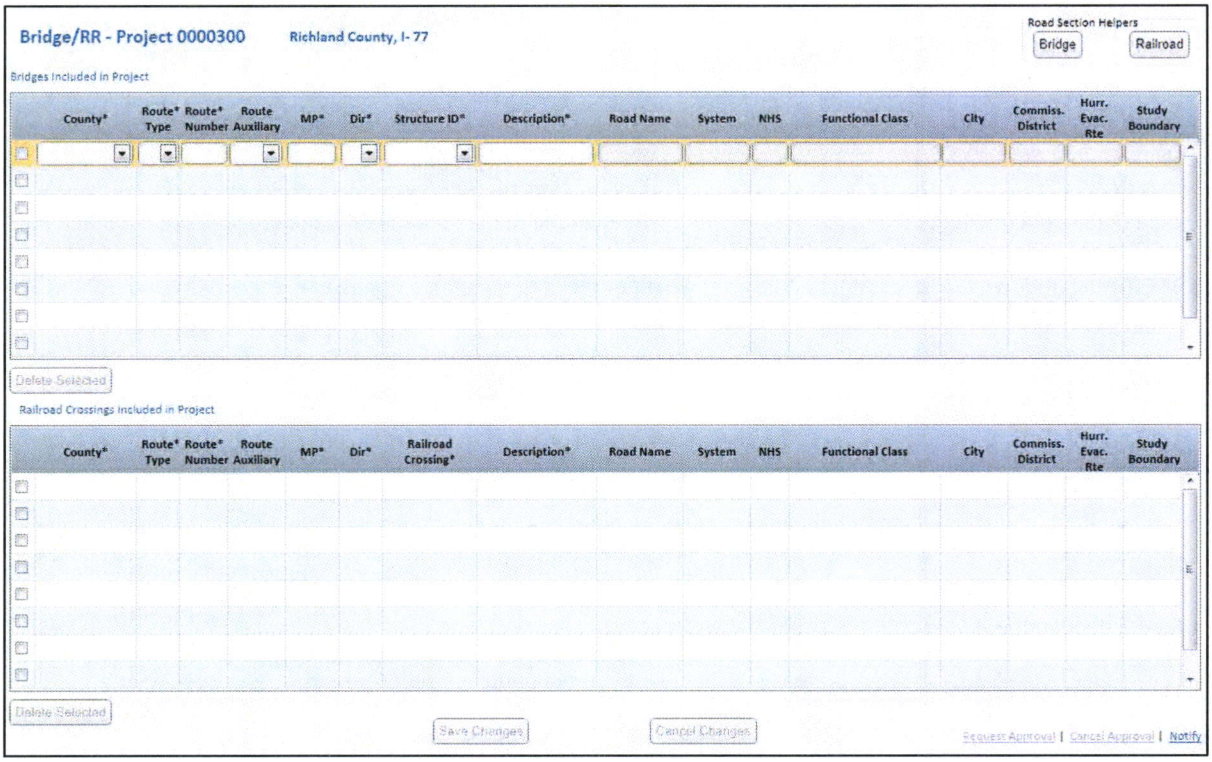


Figure 33 - Project Plan Bridge/RR

Adding a Railroad: When you first navigate to the **Bridge/RR** tab, there will be one row enabled in the table. At any point after filling in the first 5 columns inside of the **Railroad Crossing** table, you may press the **Refresh Details** button to see details about the road section in the table at the bottom of the screen. Changes may be made by editing a field and clicking the **Save** button. *Note:* A second row will only be enabled after the first row has met the proper criteria.

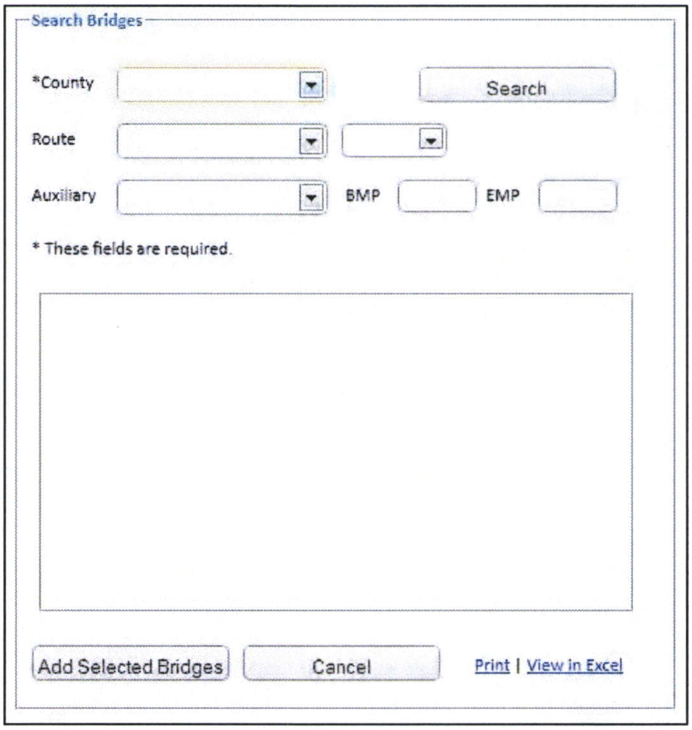


Figure 34 - Project Plan Bridge Helper

Bridge Helper: Clicking the **Bridge** button will cause the interface displayed below to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Bridges** to transfer these routes into the Roads display. *Note:* The **County** field is required for the search to work.

Railroad Helper:

Clicking the **Railroad** button will cause the interface displayed on the right to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Crossings** to transfer these routes into the Roads display. *Note:* The **County** field is required for the search to work.

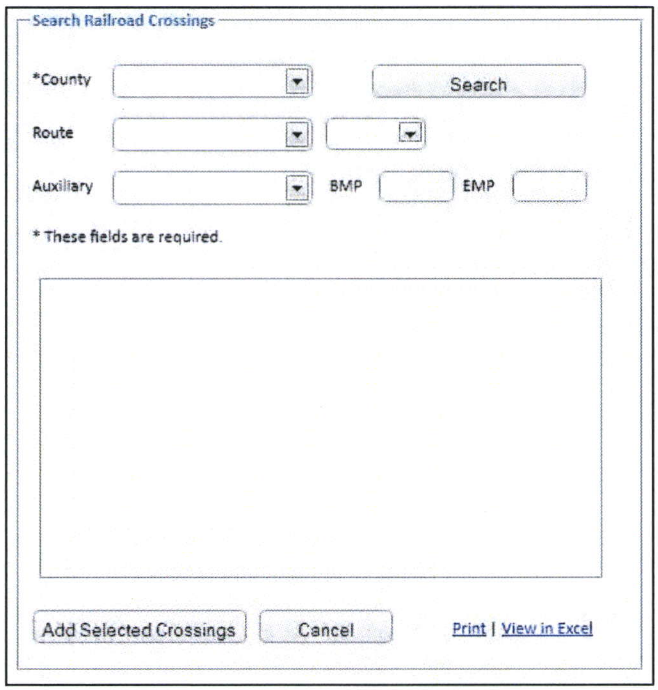


Figure 35 - Project Plan Railroad Helper

5. Projects – Program

A project is said to be programmed when a request to obligate funding has been approved. This section is dedicated to programming and modifying planned projects.

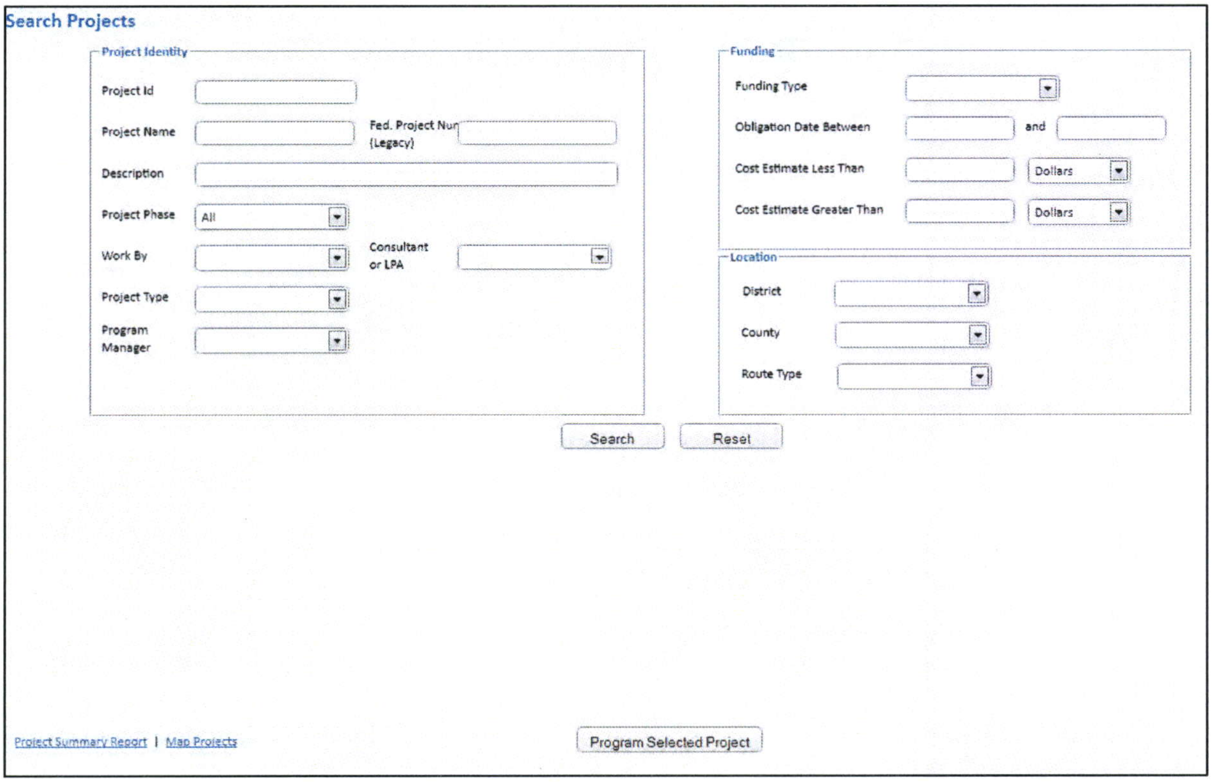


Figure 36 - Project Program Search

5.1 Search Tab

The search function for the **Project Programming** screen is similar to the search screens previously mentioned in this guide (enter criteria and click **Search**). The exceptions here are that the **Project Program** search will search for projects in both the planning and programming phases, and that the **View Selected Project** button has been replaced with the **Program Selected Project** button.

Programming: Once criteria is entered and searched for, and a project has been highlighted, click the **Program Selected Project** button. This will take you to the **General** tab, which is displayed below.

5.2 General Tab

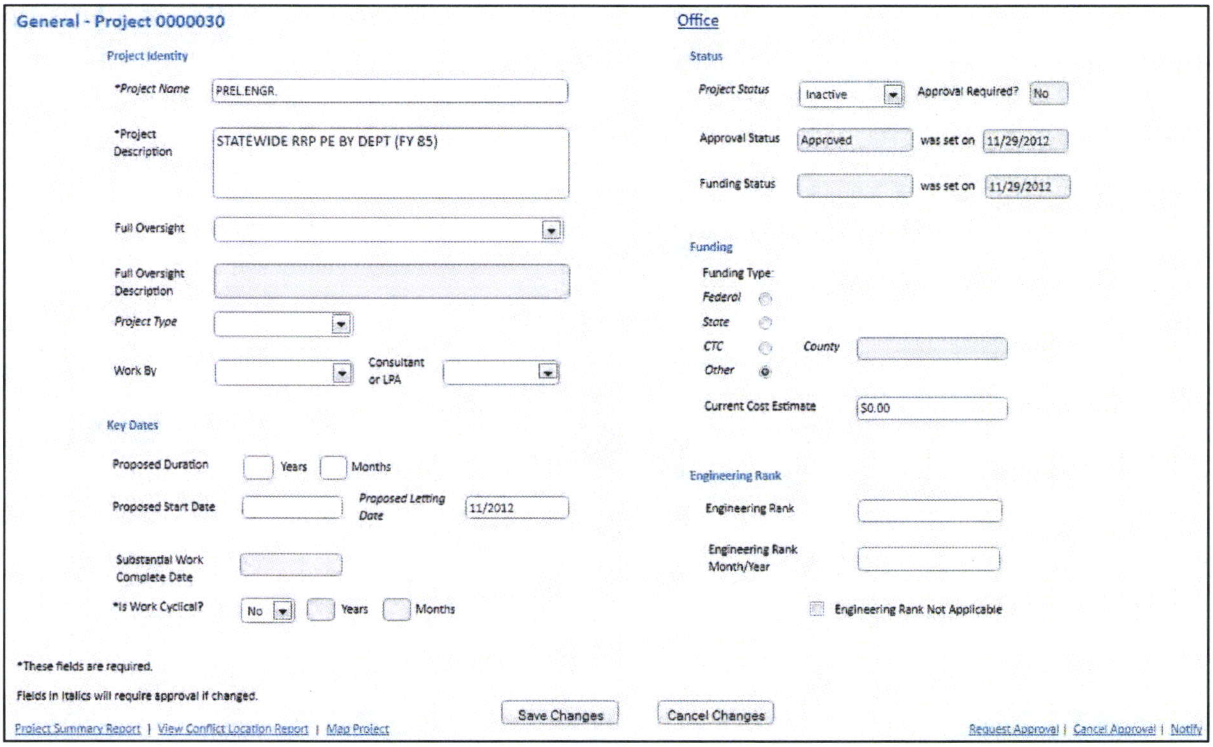


Figure 37 - Project Program General Tab

To program the project, you must ensure that, at a minimum, every field marked with an asterisk (*) is filled out (**Project Name, Project Description, Is Work Cyclical?**). *Note:* Fields in italics will require approval if changed. After the search criteria are entered, you may choose to save or cancel your changes by clicking on the corresponding button.

5.3 Location Tab

The **Location** tab contains several options for you to define the project location, as defined and display below.

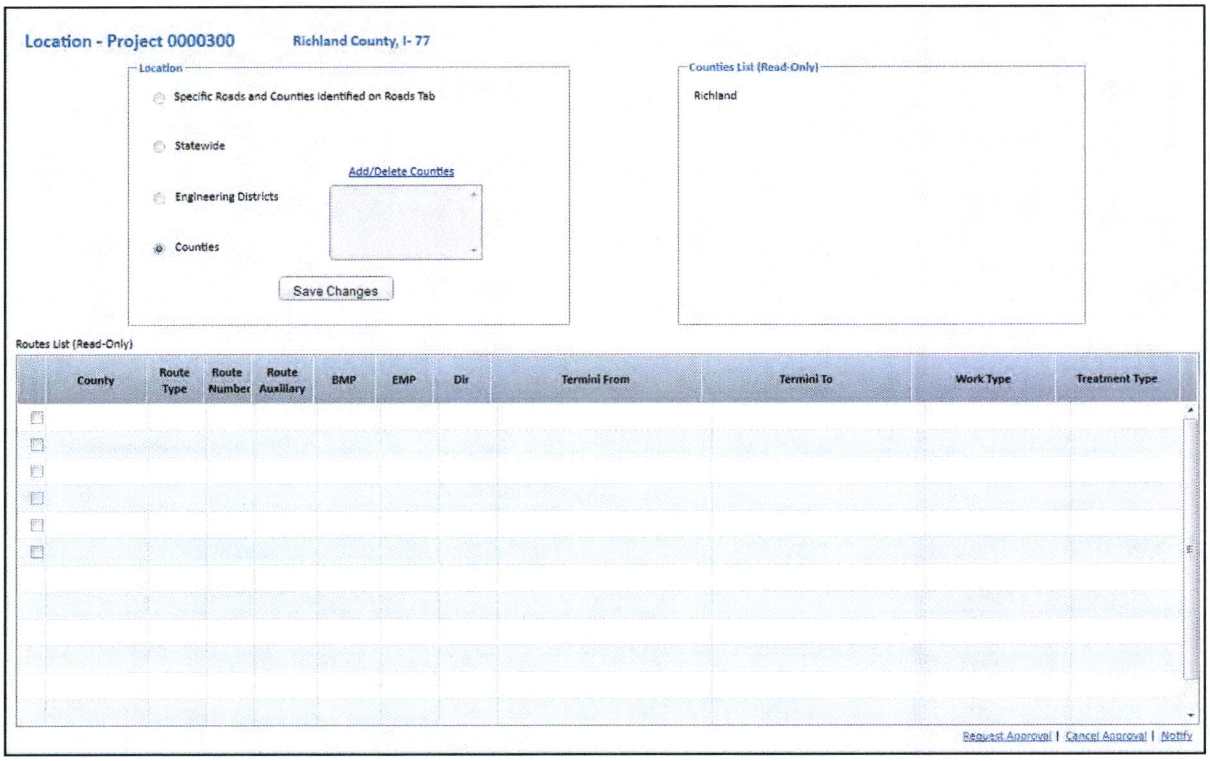


Figure 38 - Project Program Locations Tab

Specific Roads and Counties Identified on Roads Tab: This option allows you to enter the project counties and routes on the **Roads** tab.

Statewide: This option is available for defining the general area of a project when parts of it lay in different areas of the state. If this option is chosen, the **Roads** tab in P2S will be disabled.

Engineering Districts: This option allows the user to define one or more engineering districts as the project location. If this option is chosen, the **Roads** tab in P2S will be disabled.

Counties: This option allows the user to define one or more counties as the project location. If this option is chosen, the **Roads** tab in P2S will be disabled. Selecting this option will also bring up the **Add/Delete Counties** interface. When this link is clicked, you may select the districts to be used in the project.

5.4 Roads Tab

Adding a Road: When you first navigate to the **Roads** tab, there will only be one row enabled in the table. At any point after filling in the first 6 columns, you may press the **Refresh Details** button to see details about the road section in the table at the bottom of the screen. Changes may be made by editing a field and clicking the **Save** button. *Note:* A second row will only be enabled after the first row has met the proper criteria.

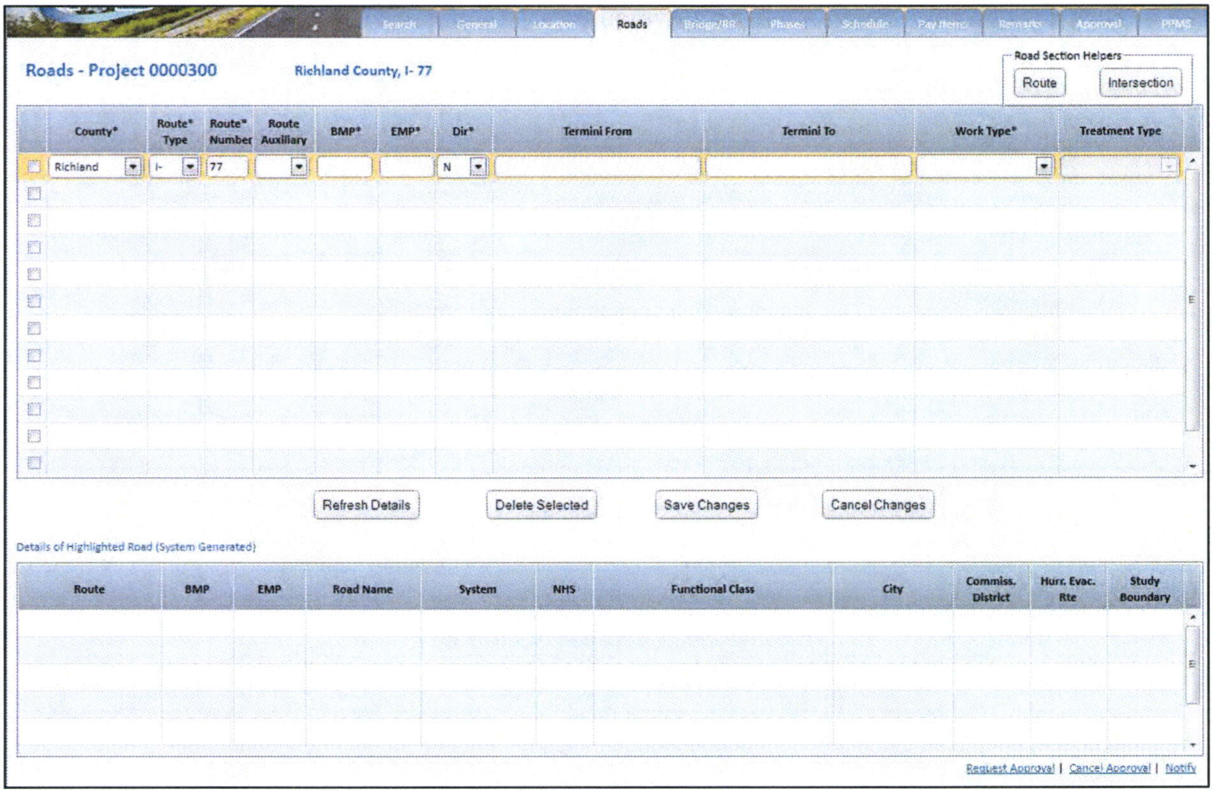
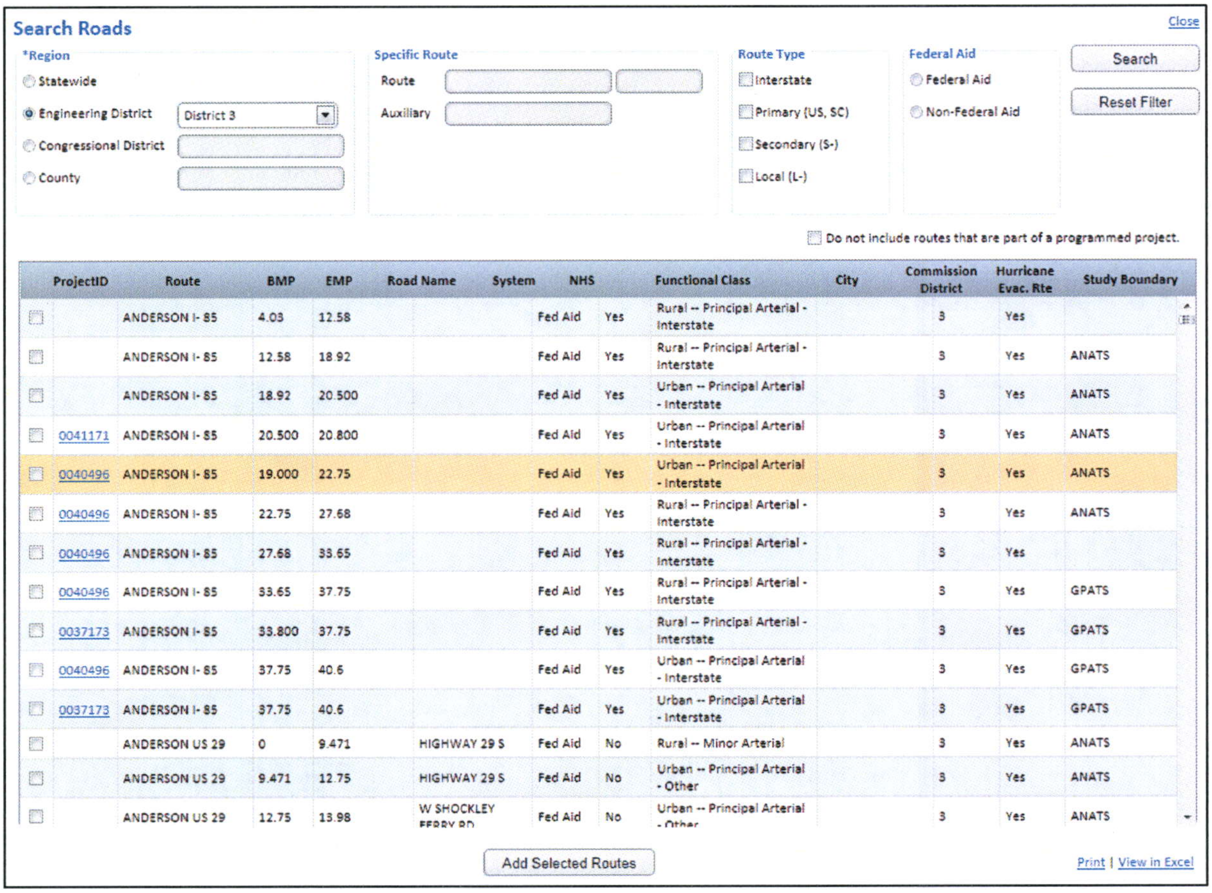


Figure 39 - Project Program Roads Tab

There are two buttons located at the top right of the above image that can assist you in selecting either roads or intersections to add. If you want to add a new route based on either criterion, click the **Route** or **Intersection** button, depending on the necessity.

Route Helper: Clicking the **Route** button will cause the interface displayed below to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Routes** to transfer these routes into the **Roads** display. *Note:* The **Region** field requires an option to be selected in order for the search to work.



	ProjectID	Route	BMP	EMP	Road Name	System	NHS	Functional Class	City	Commission District	Hurricane Evac. Rte	Study Boundary
☐		ANDERSON I- 85	4.03	12.58		Fed Aid	Yes	Rural -- Principal Arterial - Interstate		3	Yes	
☐		ANDERSON I- 85	12.58	18.92		Fed Aid	Yes	Rural -- Principal Arterial - Interstate		3	Yes	ANATS
☐		ANDERSON I- 85	18.92	20.500		Fed Aid	Yes	Urban -- Principal Arterial - Interstate		3	Yes	ANATS
☐	0041171	ANDERSON I- 85	20.500	20.800		Fed Aid	Yes	Urban -- Principal Arterial - Interstate		3	Yes	ANATS
☐	0040496	ANDERSON I- 85	19.000	22.75		Fed Aid	Yes	Urban -- Principal Arterial - Interstate		3	Yes	ANATS
☐	0040496	ANDERSON I- 85	22.75	27.68		Fed Aid	Yes	Rural -- Principal Arterial - Interstate		3	Yes	ANATS
☐	0040496	ANDERSON I- 85	27.68	33.65		Fed Aid	Yes	Rural -- Principal Arterial - Interstate		3	Yes	
☐	0040496	ANDERSON I- 85	33.65	37.75		Fed Aid	Yes	Rural -- Principal Arterial - Interstate		3	Yes	GPATS
☐	0037173	ANDERSON I- 85	33.800	37.75		Fed Aid	Yes	Rural -- Principal Arterial - Interstate		3	Yes	GPATS
☐	0040496	ANDERSON I- 85	37.75	40.6		Fed Aid	Yes	Urban -- Principal Arterial - Interstate		3	Yes	GPATS
☐	0037173	ANDERSON I- 85	37.75	40.6		Fed Aid	Yes	Urban -- Principal Arterial - Interstate		3	Yes	GPATS
☐		ANDERSON US 29	0	9.471	HIGHWAY 29 S	Fed Aid	No	Rural -- Minor Arterial		3	Yes	ANATS
☐		ANDERSON US 29	9.471	12.75	HIGHWAY 29 S	Fed Aid	No	Urban -- Principal Arterial - Other		3	Yes	ANATS
☐		ANDERSON US 29	12.75	13.98	W SHOCKLEY FERRY RD	Fed Aid	No	Urban -- Principal Arterial - Other		3	Yes	ANATS

Figure 40 - Project Program Routes Helper

Intersection Helper:

Clicking the **Intersection** button will cause the interface displayed on the right to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Routes** to transfer these routes into the **Roads** display. *Note:* The **County** and **Route** fields are required for the search to work.

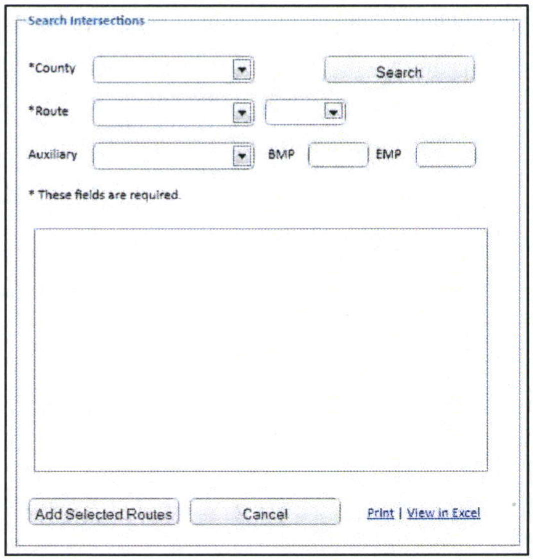


Figure 41 - Project Program Intersection Helper

5.5 Bridge/RR Tab

Adding a Bridge: When you first navigate to the **Bridge/RR** tab, there will be one row enabled in the table. At any point after filling in the first 5 columns of the **Bridge** table, you may press the **Refresh Details** button to see details about the road section in the table at the bottom of the screen. Changes may be made by editing a field and clicking the **Save** button. *Note:* A second row will only be enabled after the first row has met the proper criteria.

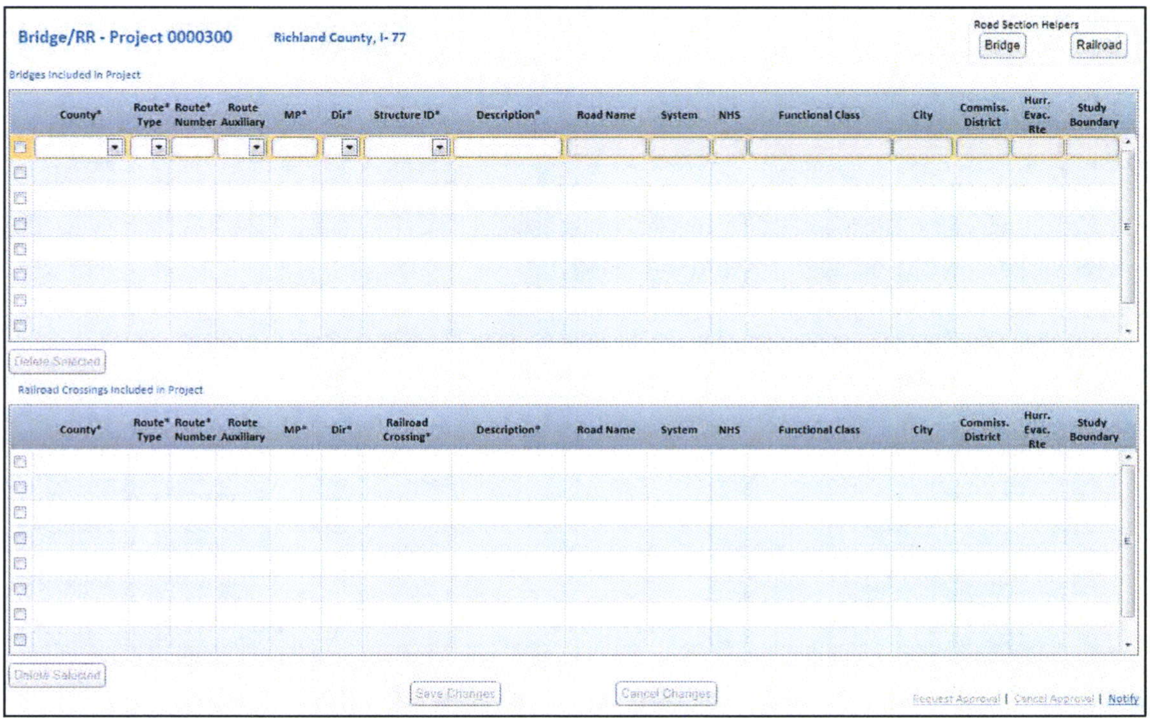


Figure 42 - Project Program Bridge/RR Tab

Adding a Railroad: When you first navigate to the **Bridge/RR** tab, there will be one row enabled in the table. At any point after filling in the first 5 columns inside of the **Railroad Crossing** table, you may press the **Refresh Details** button to see details about the road section in the table at the bottom of the screen. Changes may be made by editing a field and clicking the **Save** button. *Note:* A second row will only be enabled after the first row has met the proper criteria.

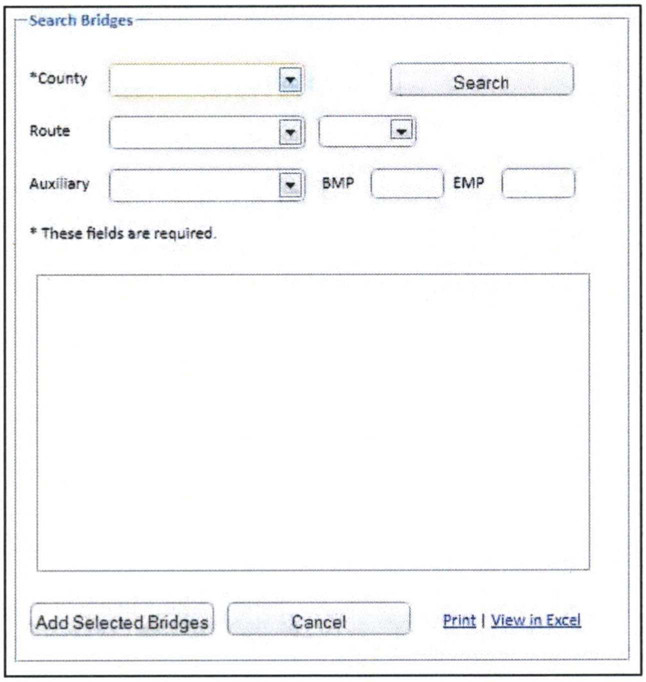


Figure 43 - Project Program Bridges Helper

Bridge Helper: Clicking the **Bridge** button will cause the interface displayed below to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Bridges** to transfer these routes into the Roads display. *Note:* The **County** field is required for the search to work.

Railroad Helper:

Clicking the **Railroad** button will cause the interface displayed on the right to appear. Enter in the search criterion and click **Search**. You will then be able to choose from any of the results, and click **Add Selected Crossings** to transfer these routes into the Roads display. *Note:* The **County** field is required for the search to work.

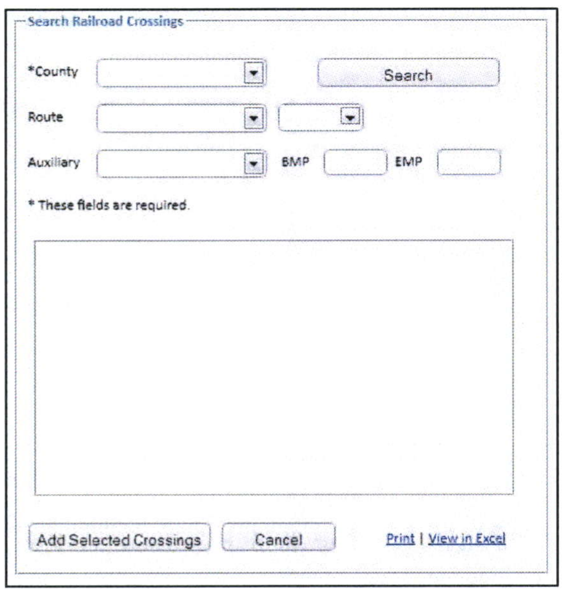


Figure 44 - Project Program Railroad Helper

5.6 Phases Tab

At any point, you can expand any information on the rows available from the **Phases** screen by clicking the **+** at the beginning of the row.

Note: In the image below, the **Unlink from P/E Project** and **Unlink from ROW Project** buttons can interchangeably be **Link to P/E Project** and **Link to ROW Project**. This depends on whether or not the project is already linked to one (or both) of the projects.

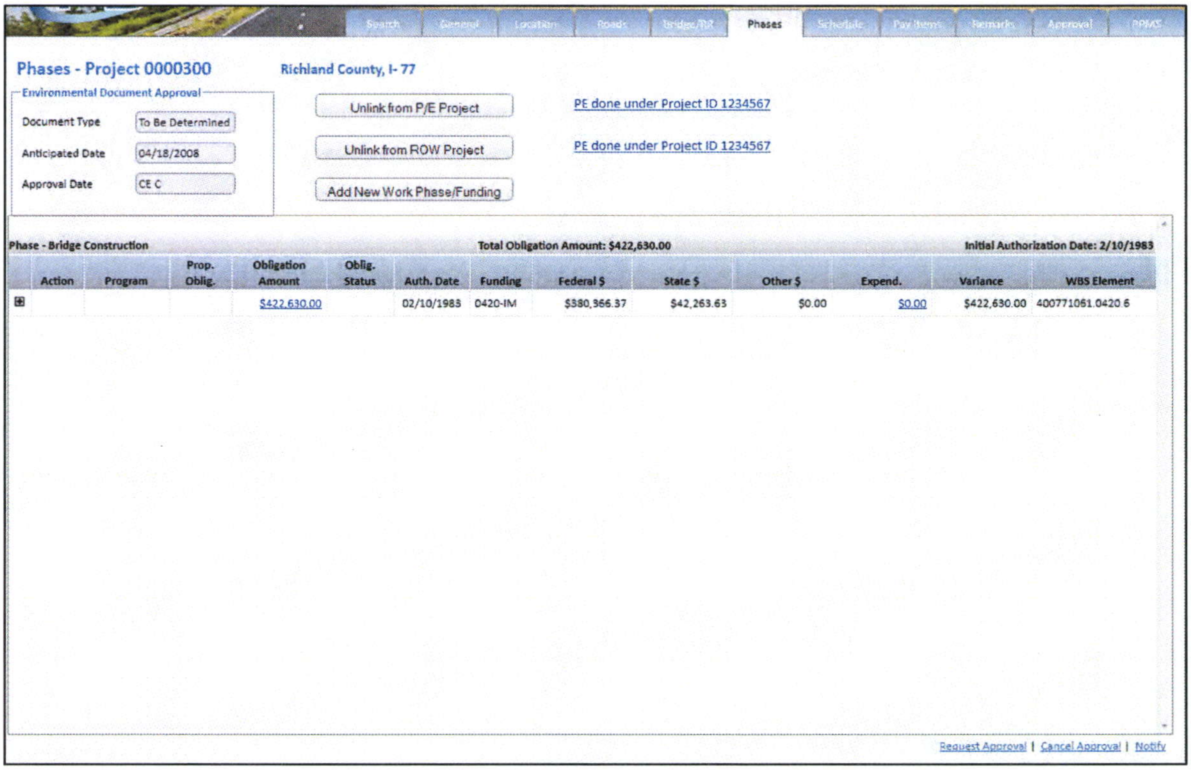


Figure 45 - Project Program Phases Tab

Link to P/E Project: Clicking this button will load the following interface.

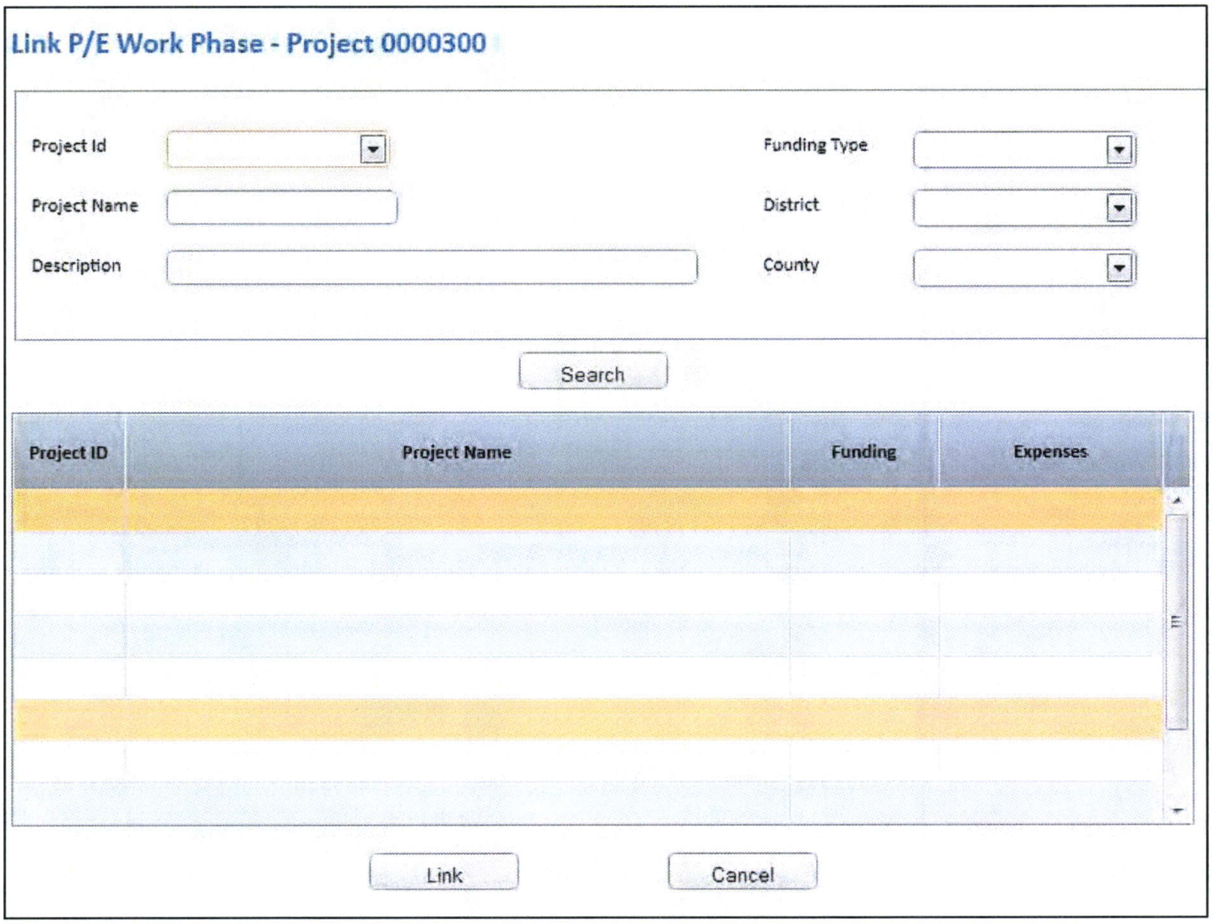


Figure 46 - Project Program Link P/E Work Phase Interface

After running a search based off of your desired criteria, you may select a project from the list of results and click **Link**.

Link to ROW Project: Clicking this button will load an interface very similar to the image shown above. Search for your criteria, select a project, and click **Link** if you wish to link the project.

Unlink from P/E Project: Clicking this button will load a confirmation-for-deletion prompt. Make your choice and carry on.

Unlink from ROW Project: Clicking this button will load a confirmation-for-deletion prompt. Make your choice and carry on.

Add New Work Phase/Funding: This button should only be available when you have been granted the **Ability to Program Projects** permission, and there are no work phase funding sources assign to the project. When the button is clicked it, the interface shown below will appear.

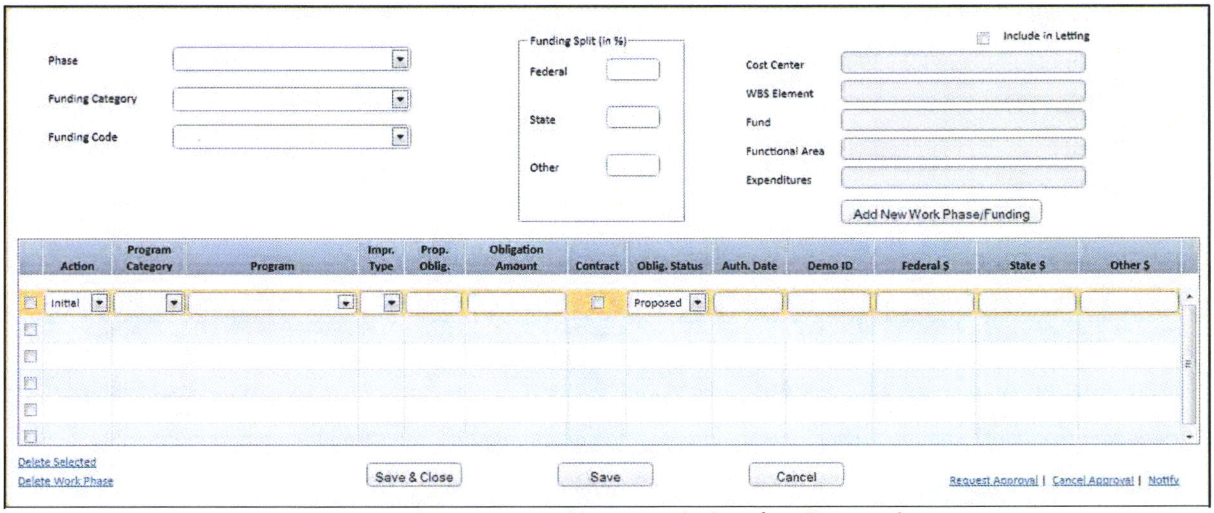


Figure 47 - Project Program Add New Work Phase/Funding Interface

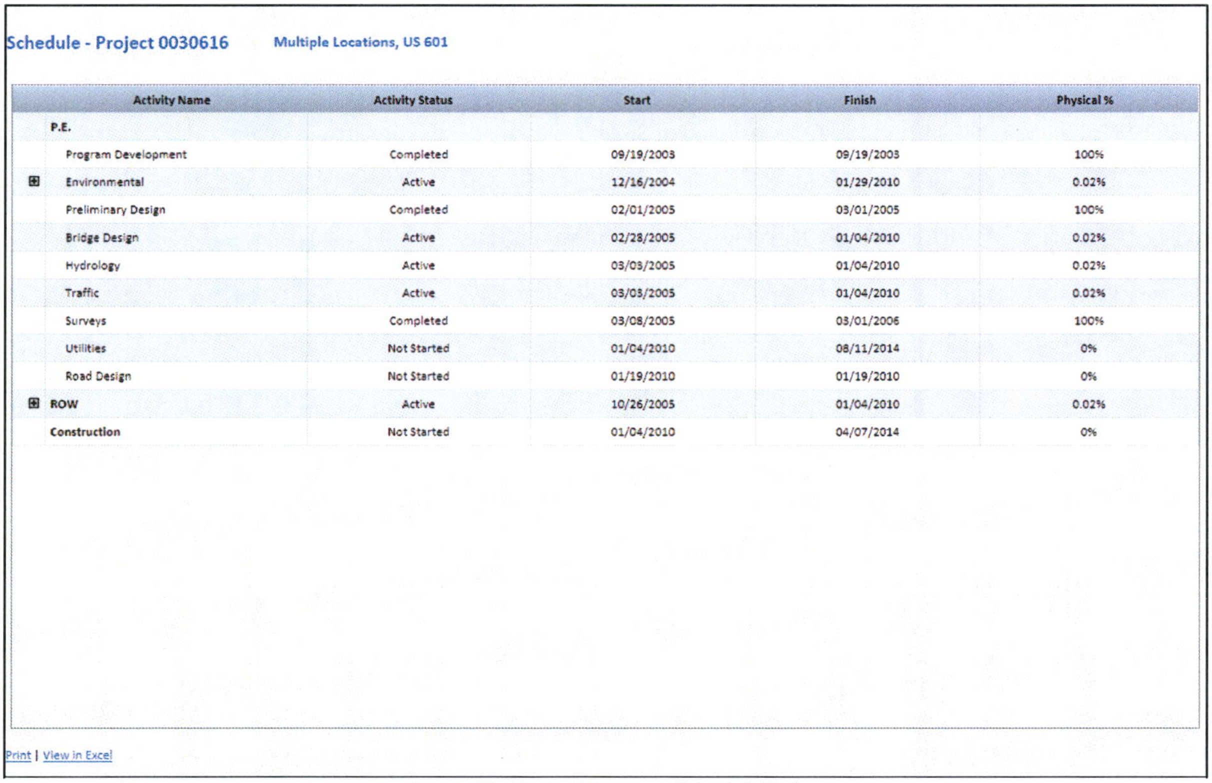
Fill in information as needed.

The **Include in Letting** checkbox denotes if the work phase is to be included in the letting of the project or not. This field is associated with the work phase directly such that the checked state applies to all work phase funding sources for the corresponding work phase. This check box will be unchecked and disabled for the following work phase types which are never let: **Utilities, ROW,** and **PE**.

The **Delete Selected** button will only delete any row which has been marked by its check box, found at the beginning of each row. The **Delete Work Phase** button may be clicked if all funding transactions have their **Obligation Status** set to "Proposed."

5.7 Schedule Tab

The **Schedule** tab contains schedule information for the activities associated with the project. The data on this tab will be retrieved from the Primavera P6 database based on the given Project ID. The information is obtained using an API provided by Primavera, and is displayed in read-only format.


Schedule - Project 0030616 Multiple Locations, US 601

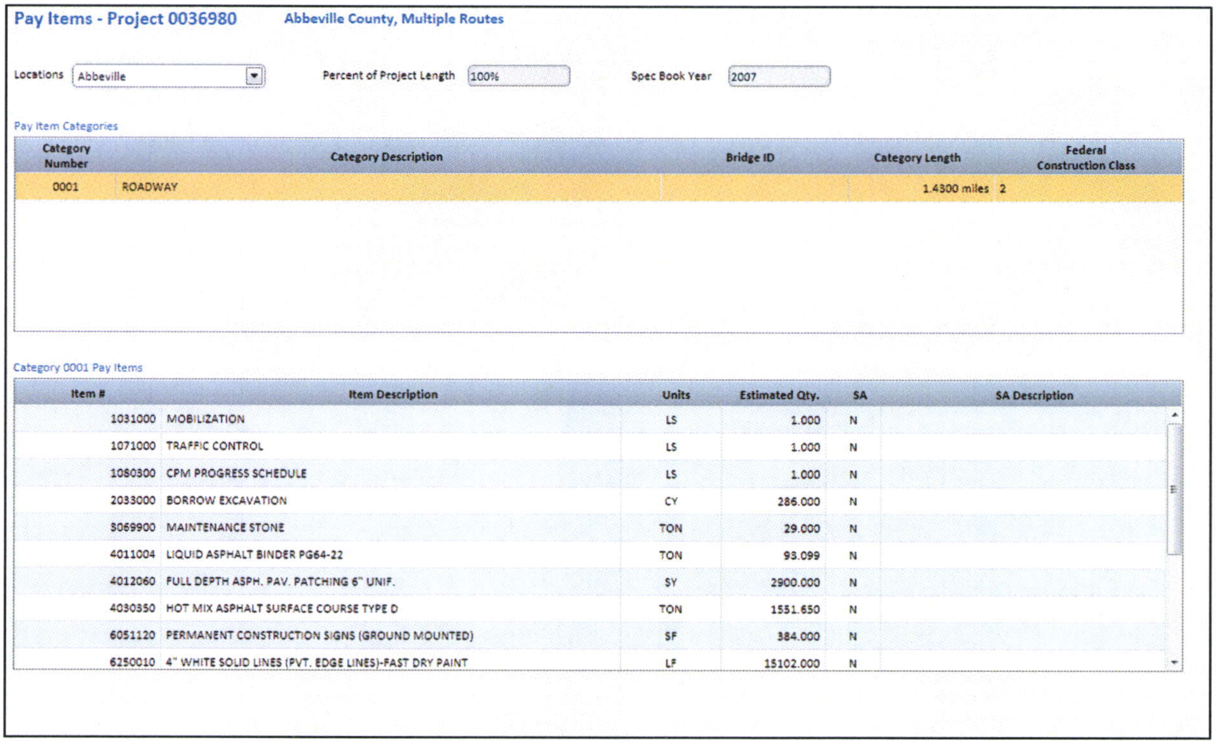
Activity Name	Activity Status	Start	Finish	Physical %
P.E.				
Program Development	Completed	09/19/2003	09/19/2003	100%
⊞ Environmental	Active	12/16/2004	01/29/2010	0.02%
Preliminary Design	Completed	02/01/2005	03/01/2005	100%
Bridge Design	Active	02/28/2005	01/04/2010	0.02%
Hydrology	Active	03/03/2005	01/04/2010	0.02%
Traffic	Active	03/03/2005	01/04/2010	0.02%
Surveys	Completed	03/08/2005	03/01/2006	100%
Utilities	Not Started	01/04/2010	08/11/2014	0%
Road Design	Not Started	01/19/2010	01/19/2010	0%
⊞ ROW	Active	10/26/2005	01/04/2010	0.02%
Construction	Not Started	01/04/2010	04/07/2014	0%

Print | View in Excel

Figure 48 - Project Program Schedule Tab

5.8 Pay Items Tab

P2S provides the ability to allow the input and modification of quantities and items required for a given project. The system calculates the cost of each item given this information. The screen shot below depicts this information in a read-only format.



Category Number	Category Description	Bridge ID	Category Length	Federal Construction Class
0001	ROADWAY		1.4300 miles	2

Item #	Item Description	Units	Estimated Qty.	SA	SA Description
1031000	MOBILIZATION	LS	1.000	N	
1071000	TRAFFIC CONTROL	LS	1.000	N	
1080300	CPM PROGRESS SCHEDULE	LS	1.000	N	
2033000	BORROW EXCAVATION	CY	286.000	N	
3069900	MAINTENANCE STONE	TON	29.000	N	
4011004	LIQUID ASPHALT BINDER PG64-22	TON	93.099	N	
4012060	FULL DEPTH ASPH. PAV. PATCHING 6" UNIF.	SY	2900.000	N	
4030350	HOT MIX ASPHALT SURFACE COURSE TYPE D	TON	1551.650	N	
6051120	PERMANENT CONSTRUCTION SIGNS (GROUND MOUNTED)	SF	384.000	N	
6250010	4" WHITE SOLID LINES (PVT. EDGE LINES)-FAST DRY PAINT	LF	15102.000	N	

Figure 49 - Project Pay Items Tab

5.9 Remarks Tab

The **Remarks** tab provides a user with the ability to view all remarks previously entered by P2S system users for a project. The **Remarks** tab also provides a user with the ability to associate a remark to a project.

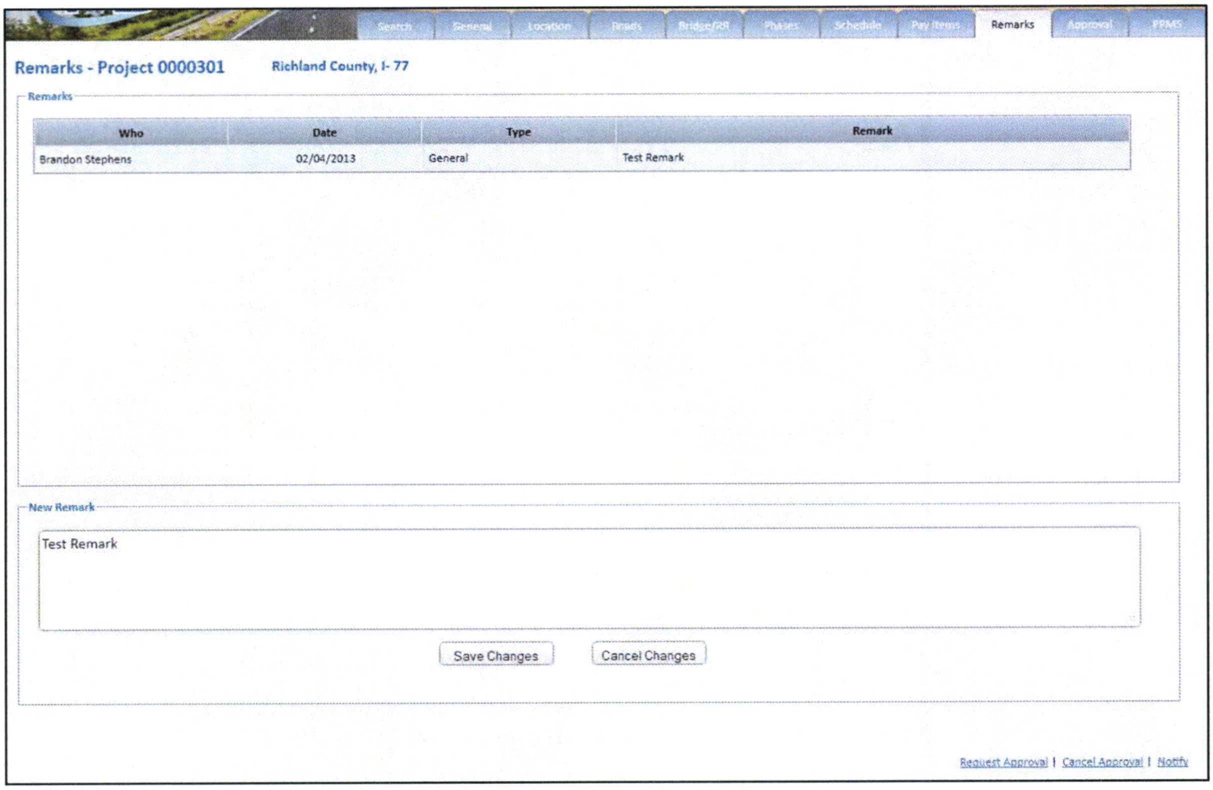


Figure 50 - Project Program Remarks Tab

Adding a New Remark: To add a new remark, type your remark in the **New Remark** field and click **Save Changes**. As shown in the image above, it will be added after saving.

5.10 Approvals Tab

During the life of a project in P2S, many changes will occur that require approval by DOT personnel having direct or indirect responsibility for the project.

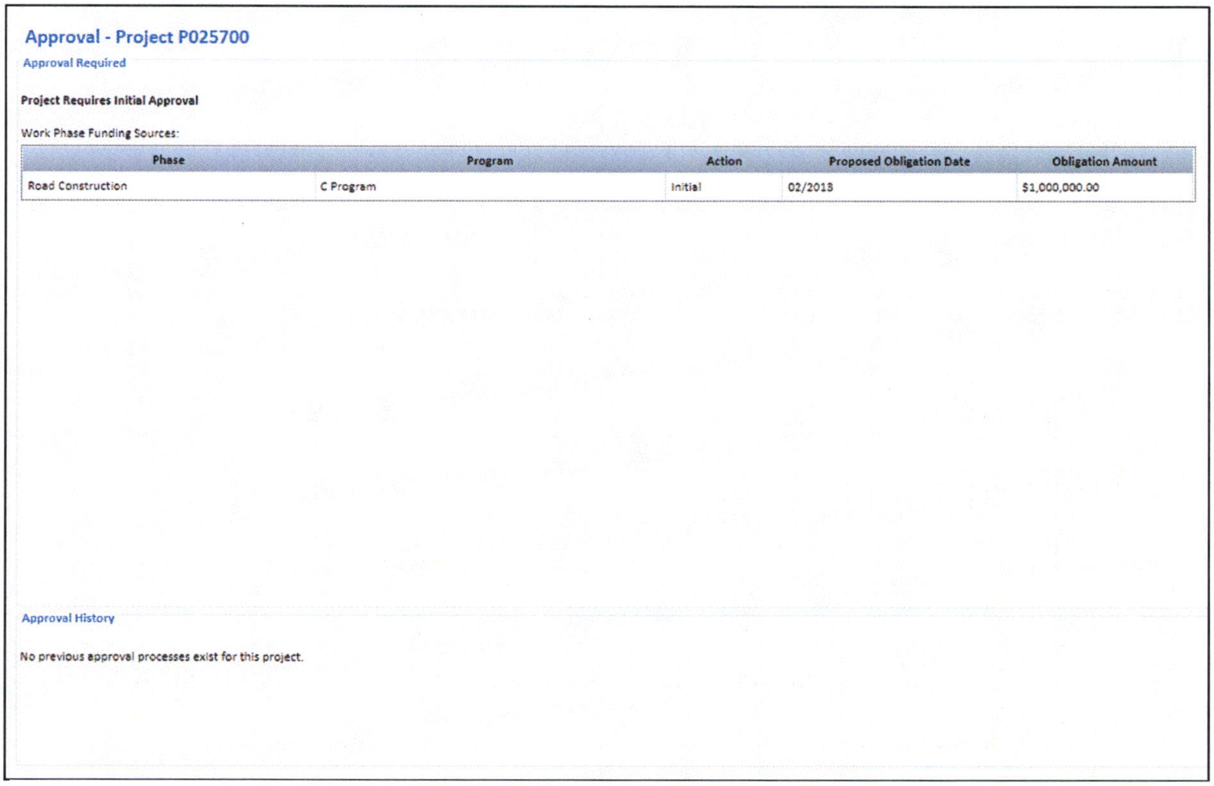


Figure 51 - Project Program Approvals Tab

5.11 PPMS Tab

The **PPMS** tab contains legacy identifying information about projects originating from PPMS. Whereas the PPMS system was "work phase" driven, the P2S system is "project" driven. As such, P2S no longer creates the same identifying information such as project suffix, file number, etc. However, so that users of the P2S system can still query and locate information by the legacy ID information, much of this data has been retained for viewing purposes only. The PPMS tab will only be visible for projects which once existed in PPMS. This data is displayed in a read-only interface.

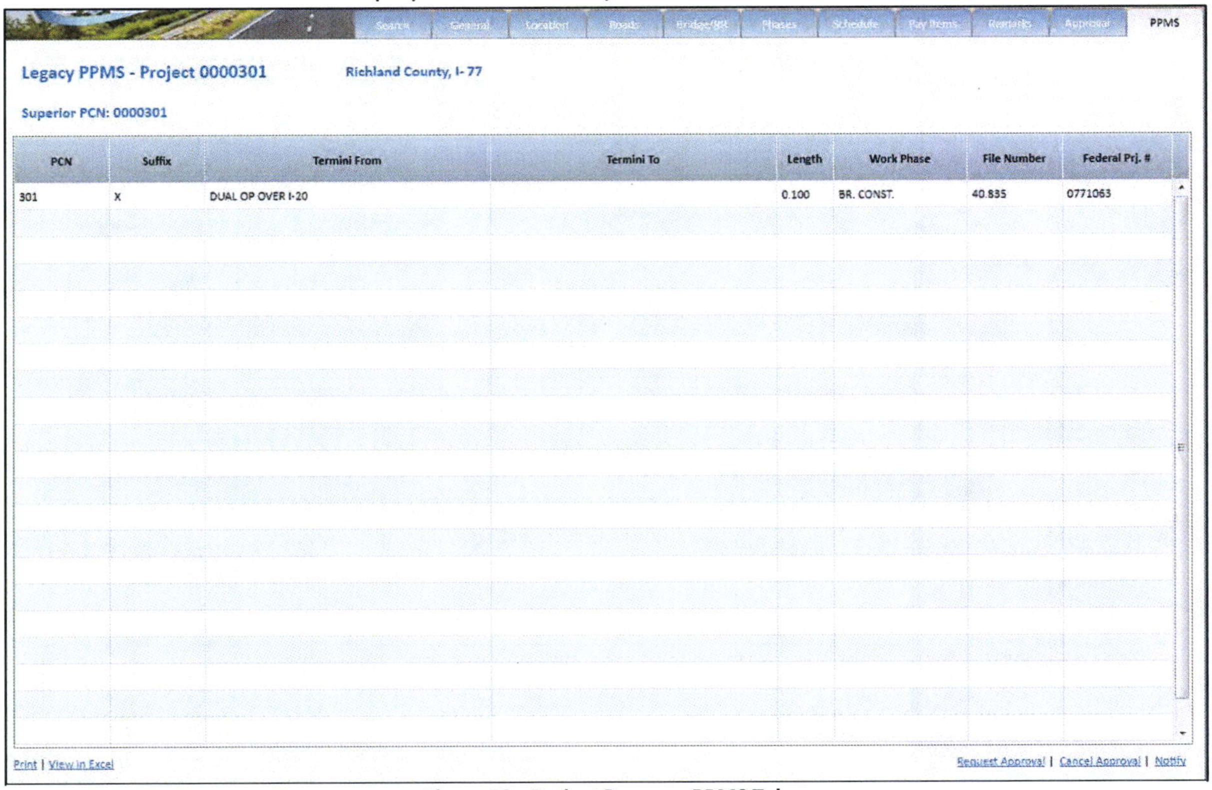


Figure 52 - Project Program PPMS Tab

6. Building Proposals

P2S provides the capability to build proposals for letting. The proposal will consist of a Proposal ID, an associated project or set of projects, and other pertinent information such as project location and pay item estimate data. A proposal exists in P2S from its creation (i.e. when projects are associated with it) until contract award. The proposal section of P2S exists to aid in letting preparation and to facilitate the integration of this data with Web Trns*port where the letting actually occurs. The proposal section of P2S helps to collate and manage information in P2S for a letting prior to its transmission and subsequent manipulation in Web Trns*port.

6.1 Search Tab

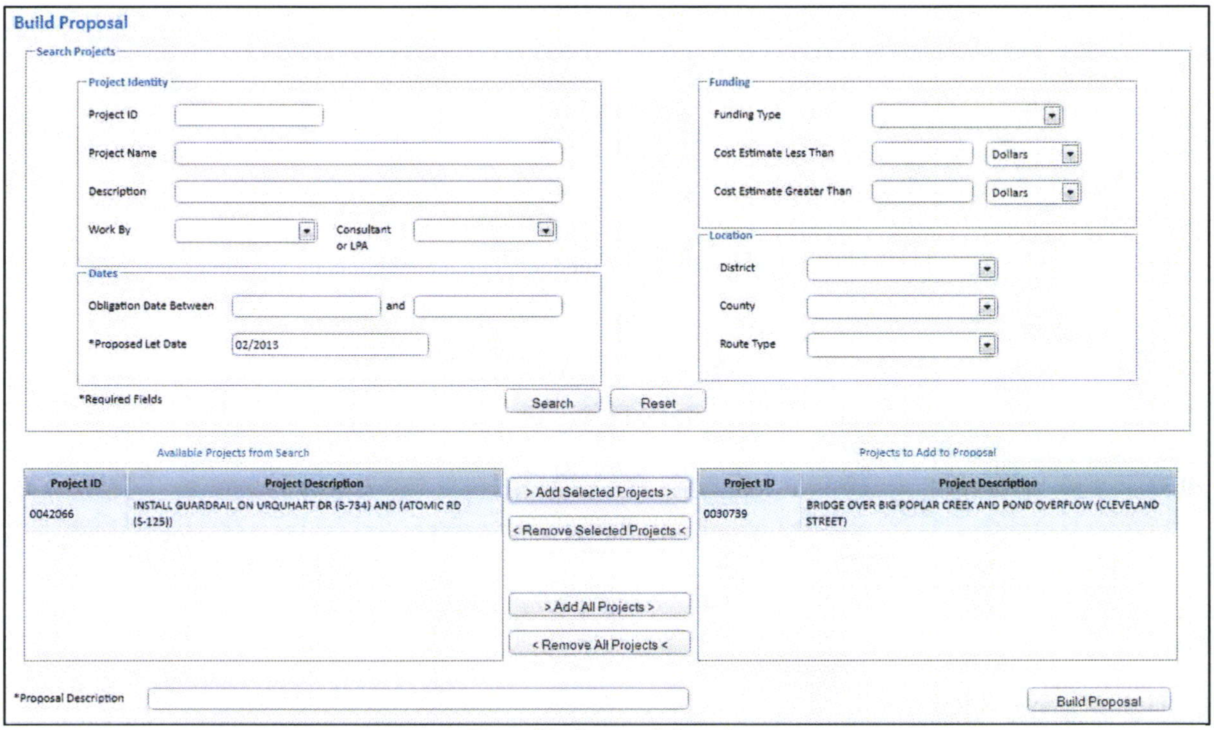


Figure 53 - Proposals Search

Searching for Projects: Before you can add any projects to a proposal, you will need to search for them. To do this, enter in your search criteria within the set of **Search Projects** fields. *Note:* You must have a **Proposed Let Date** in order to search.

Adding Projects to and Removing Projects form Proposals: To add a project to the proposal, click on the desired project within the **Available Projects from Search** table and then click **Add Selected Project**. If you wish to add each project that was available from the search, click **Add All Projects**. Conversely, to remove a single project or each project from a proposal, click the corresponding button. Once ready, clicking the **Build Proposals** button will display a confirmation message that contains a contract number.

7. Modifying Proposals

The **Modify Proposal** capability allows users with permission to change which projects are associated with a proposal. The project association changes are managed through an interface similar to **Build Proposal,** discussed previously. The user first locates the proposal to modify by entering search criteria. Note that the proposal search will only locate existing proposals that have not yet been transmitted to Web Trns*port.

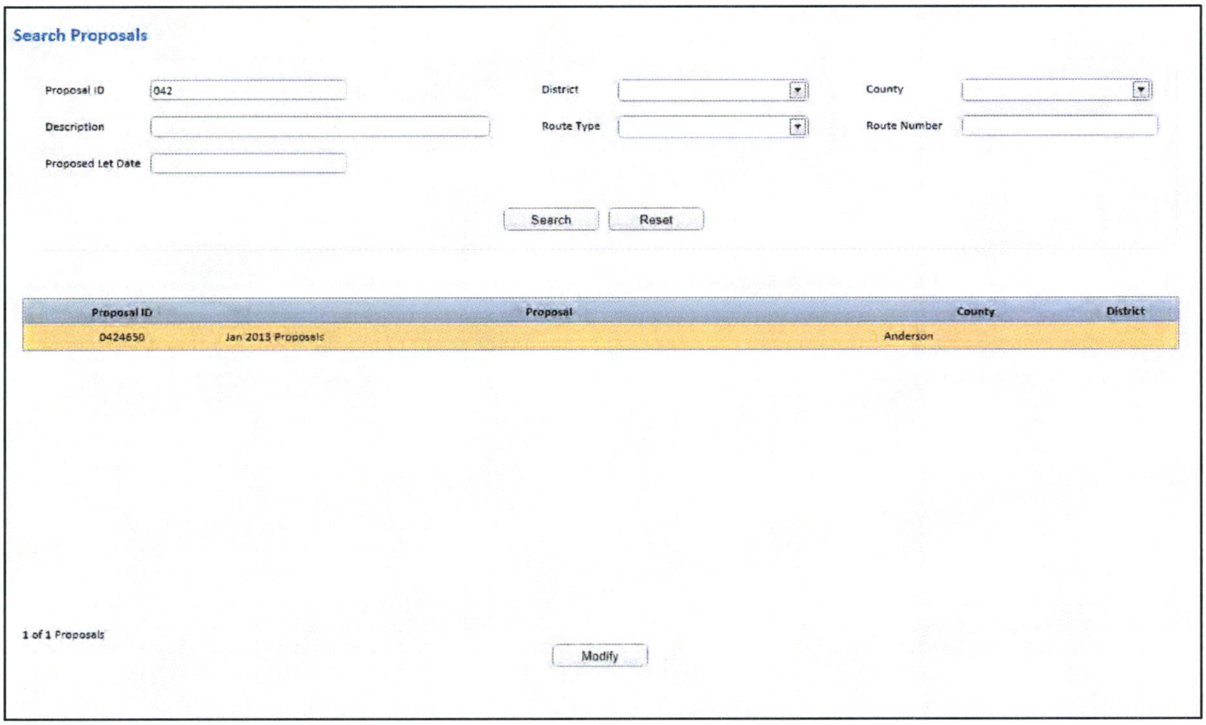


Figure 54 - Modifying Proposals Tab

7.1 Search Tab

To search for a proposal, you need only enter in criteria and click **Search**. Once the search is complete, you will be displayed a list of results to choose from. Select the proposal you wish to modify and click **Modify**. The screen shown below will appear.

7.2 Modifying the Proposal

Searching for Projects: Before you can add any projects to a proposal, you will need to search for them. To do this, enter in your search criteria within the set of Search Projects fields. *Note:* You must have a Proposed Let Date in order to search.

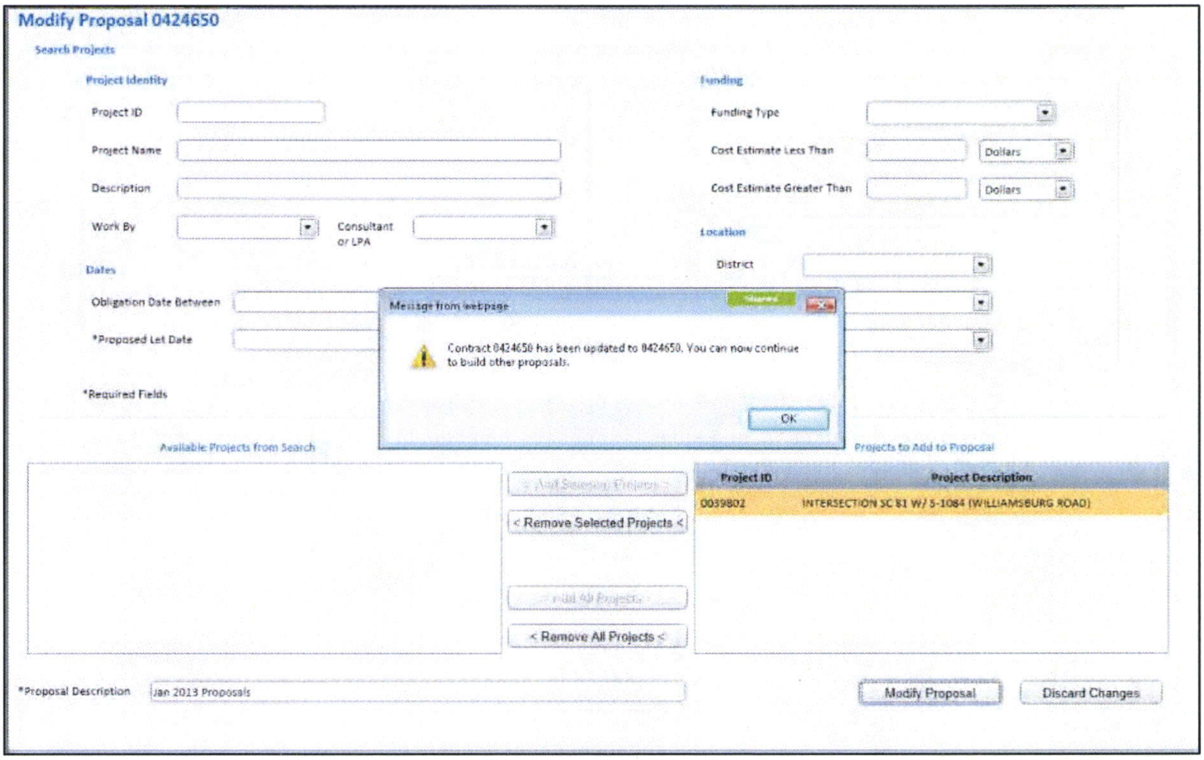


Figure 55 - Modifying Proposals Interface

Adding Projects to and Removing Projects form Proposals: To add a project to the proposal, click on the desired project within the *Available Projects* from *Search* table and then click *Add Selected Project*. If you wish to add each project that was available from the search, click *Add All Projects*.

Conversely, to remove a single project or each project from a proposal, click one of the corresponding buttons.

8. Transmitting Proposals

P2S provides the ability to transmit proposals and associated projects to Web Trns*port for letting. The **Transmit Proposal** interface is used to facilitate the management of proposals for a specific letting as well as the transmission of the information into Web Trns*port. The interface allows users with appropriate permissions to obtain a list of proposals for a specific letting by first choosing a **Proposed Let Date**. Once this date is established, the system will return all existing proposals in P2S whose projects match the let date chosen.

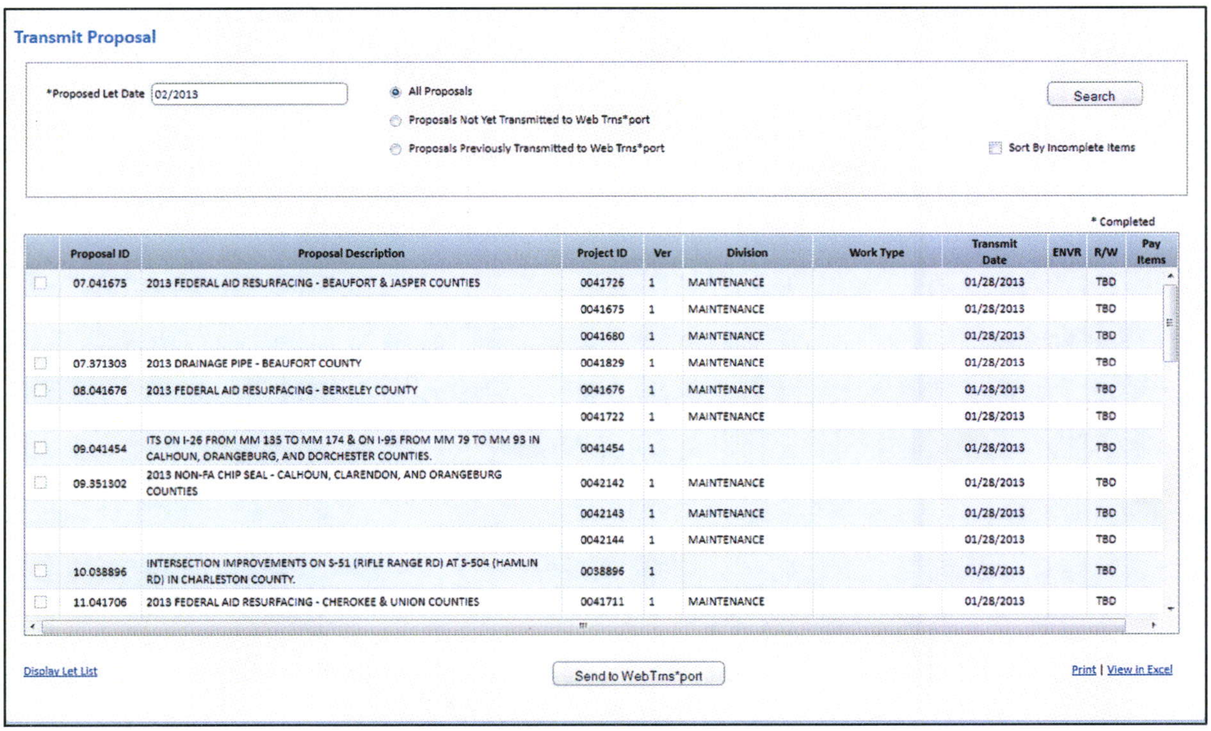


Figure 56 - Transmitting Proposals Interface

Notes: Proposals for the same letting can be transmitted at different times. All projects associated with a single proposal must be transmitted at the same time. Users can only view proposals for a letting that have been previously transmitted (no changes are allowed). Once a proposal has been transmitted to Web Trns*port, changes for any transmitted information will not be allowed.

8.1 Display Let List

To display the let list, click the **Display Let List** button on the lower left of the **Transmit Proposal** interface. *Note:* You may have to make an exception for this in your popup-blocker settings.

9. Modifying Contracts

Most data pertaining to contracts is read-only. However, there are parts of contracts that may be modified. The ways to modifying this data are described in this section

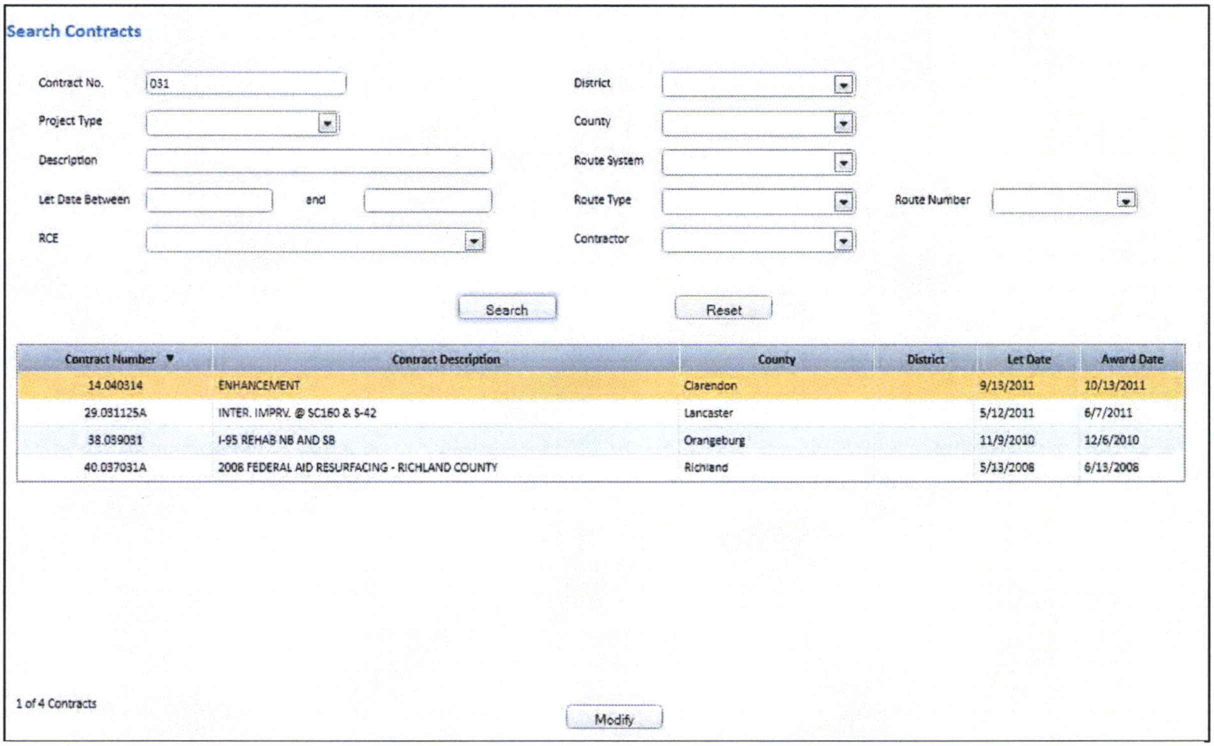


Figure 57 - Modifying Contracts Search Tab

9.1 Search Tab

To search for a contract, simply enter the criteria you wish to search for and click **Search**. A list of available contracts will appear, as shown in the image above. Select the contract you wish to modify, and click **Modify**. You will be taken to the **General Information** interface, as shown on the next page.

9.2 General Information Tab

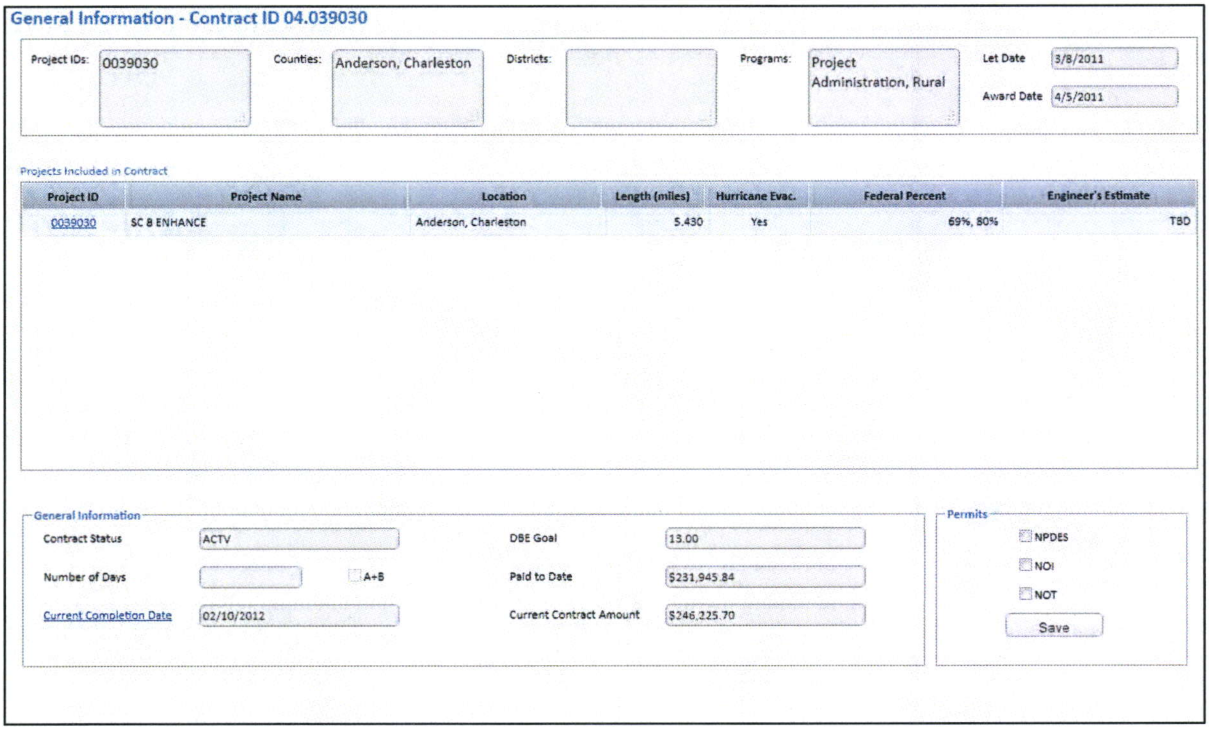


Figure 58 - Modifying Contracts General Information

Clicking the **Project ID** located under **Projects Included in Contract** will give you detailed information about the project. Clicking the **Current Completion Date** link will take you to the **Chg Orders** screen, which is covered later in this guide.

Permits: Three checkbox options appear in the permits field. They are **NPDES, NOI,** and **NOT**.

NPDES should be checked if the contract requires a Pollutant Discharge Elimination System permit. A Contracts Superuser may edit this field.

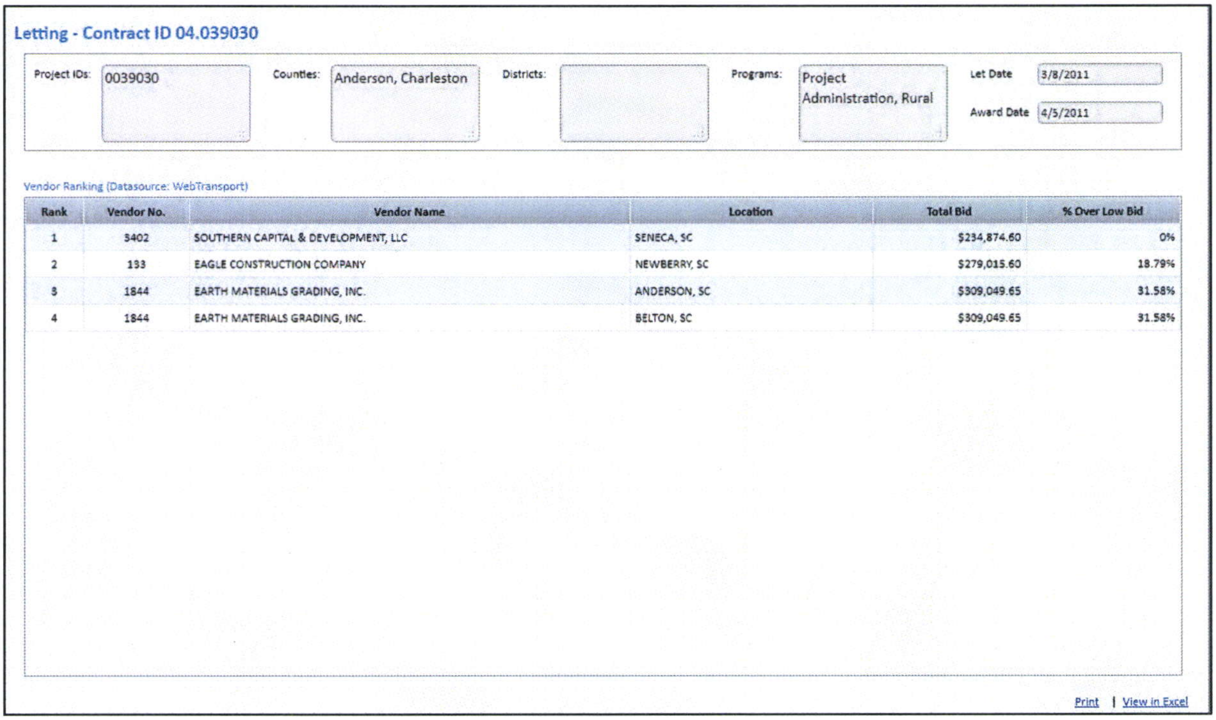
NOI should be checked if a Notice Of Intent has been submitted for the contract. A Contracts Superuser may edit this field.

NOT should be checked if a Notice Of Termination has been submitted for the contract. A Contracts Superuser may edit this field.

Current Completion Date: To view more information about the current completion date than is shown in the field, you may click **Current Completion Date** to be redirected to the **Chg Orders** screen, which is discussed further down.

9.2 Letting Tab

The **Letting** tab lists information about the vendors that bid on the contract and their bid amounts. The textboxes and data table on this screen contain read-only information retrieved from Web Trns*port. The letting and award dates are shown above the table. The table lists each vendor and their total bid amount. The lowest bid is ranked first and placed at the top of the list. Each successively higher bid is listed below it along with the percent it goes over the lowest bid.



Letting - Contract ID 04.039030

Project IDs: 0039030
Counties: Anderson, Charleston
Districts:
Programs: Project Administration, Rural
Let Date 3/8/2011
Award Date 4/5/2011

Vendor Ranking (Datasource: WebTransport)

Rank	Vendor No.	Vendor Name	Location	Total Bid	% Over Low Bid
1	3402	SOUTHERN CAPITAL & DEVELOPMENT, LLC	SENECA, SC	$234,874.60	0%
2	133	EAGLE CONSTRUCTION COMPANY	NEWBERRY, SC	$279,015.60	18.79%
3	1844	EARTH MATERIALS GRADING, INC.	ANDERSON, SC	$309,049.65	31.58%
4	1844	EARTH MATERIALS GRADING, INC.	BELTON, SC	$309,049.65	31.58%

Print | View in Excel

Figure 59 - Modifying Contracts Letting Tab

9.3 Bid Items Tab

The **Bid Items** tab lists the estimates of the prices for materials that will be used under the contract. The pay items listed on this tab will list combined estimates for identical item numbers for each project. This screen contains read-only information retrieved from Web Trns*port. It lists all of the pay items, their estimated quantities and estimated costs. These amounts are summed to reach the total estimate. This screen is displayed below.


Bid Items - Contract ID 04.039030

Project IDs: 0039030
Counties: Anderson, Charleston
Districts:
Programs: Project Administration, Rural
Let Date 3/8/2011
Award Date 4/5/2011

Datasource: WebTransport

Item No.	Item Code	Item Description	Quantity	Unit Price	Total Price
0010	793	MOBILIZATION	1.000 LS	$15,000.00	$15,000.00
0020	277	BONDS AND INSURANCE	1.000 LS	$3,500.00	$3,500.00
0030	11127	CONSTRUCTION STAKES, LINES & GRADES	1.000 EA	$5,000.00	$5,000.00
0040	773	TRAFFIC CONTROL	1.000 LS	$12,000.00	$12,000.00
0050	780	CPM PROGRESS SCHEDULE	1.000 LS	$2,000.00	$2,000.00
0060	765	CLEARING & GRUBBING WITHIN ROADWAY CLEARING & GRUBBING WITHIN ROADWAY	1.000 LS	$10,000.00	$10,000.00
0070	10888	REMOVAL & DISPOSAL OF EXISTING CURB REM. & DISP. OF EXIST. CURB	320.000 LF	$5.66	$1,811.20
0080	10777	REMOVAL & DISPOSAL OF EXISTING ASPHALT PAVEMENT REM. & DISP. OF EXIST. ASPHALT PVMT.	630.000 SY	$5.83	$3,672.90
0090	10880	REMOVAL & DISPOSAL OF EXISTING CONCRETE REM. & DISP. OF EXIST. CONC.	25.000 CY	$117.96	$2,949.00
0100	10758	UNCLASSIFIED EXCAVATION	100.000 CY	$23.45	$2,345.00
0110	12492	FINE GRADING	1000.000 SY	$2.55	$2,550.00
0120	12086	MAINTENANCE STONE	50.000 TON	$32.67	$1,633.50
0130	11964	LIQUID ASPHALT BINDER PG64-22	3.000 TON	$650.00	$1,950.00
0140	11817	FULL DEPTH ASPH. PAV. PATCHING 8" UNIF FULL DEPTH ASPHALT PAVEMENT PATCHING - 8" UNIF.	250.000 SY	$47.31	$11,827.50
0150	11831	MILLING EXISTING ASPHALT PAVEMENT 2.0" MILLING EXIST. ASPHALT PAVEMENT 2.0"	225.000 SY	$3.38	$760.50
0160	11842	MILLING EXISTING ASPHALT PAVEMENT (VARIABLE) MILLING EXIST. ASPHALT PAVEMENT (VARIABLE)	250.000 SY	$5.33	$1,332.50
0170	11716	HOT MIX ASPHALT SURFACE COURSE TYPE B H/M ASPHALT SURFACE COURSE TYPE B	40.000 TON	$54.22	$2,168.80

Grand Total: $206,865.70

Figure 60 - Modifying Contracts Bid Items Tab

9.4 Status Tab

The **Status** tab shows detailed information about the dates and amounts associated with the contract.

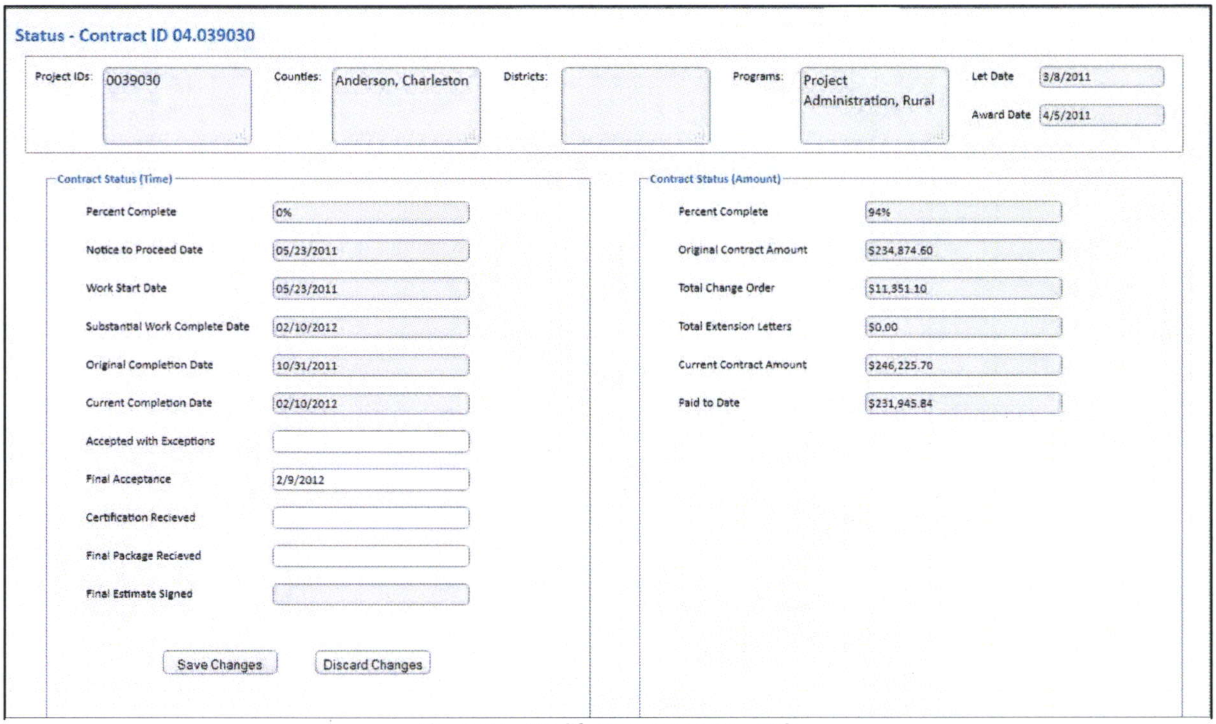


Figure 61 - Modify Contracts Status Tab

Modifying Contract Status: To change any field from **Accepted with Exceptions** to **Final Package Received** within the **Contract Status (Time)** set of fields, simply click on the field you wish to change and select a date. Click **Save Changes** or **Discard Changes** depending on how you wish to handle your edits.

9.5 Locations Tab

The **Status** tab shows detailed information about the dates and amounts associated with the contract. The information on this tab is retrieved from the P2S database and is read-only.

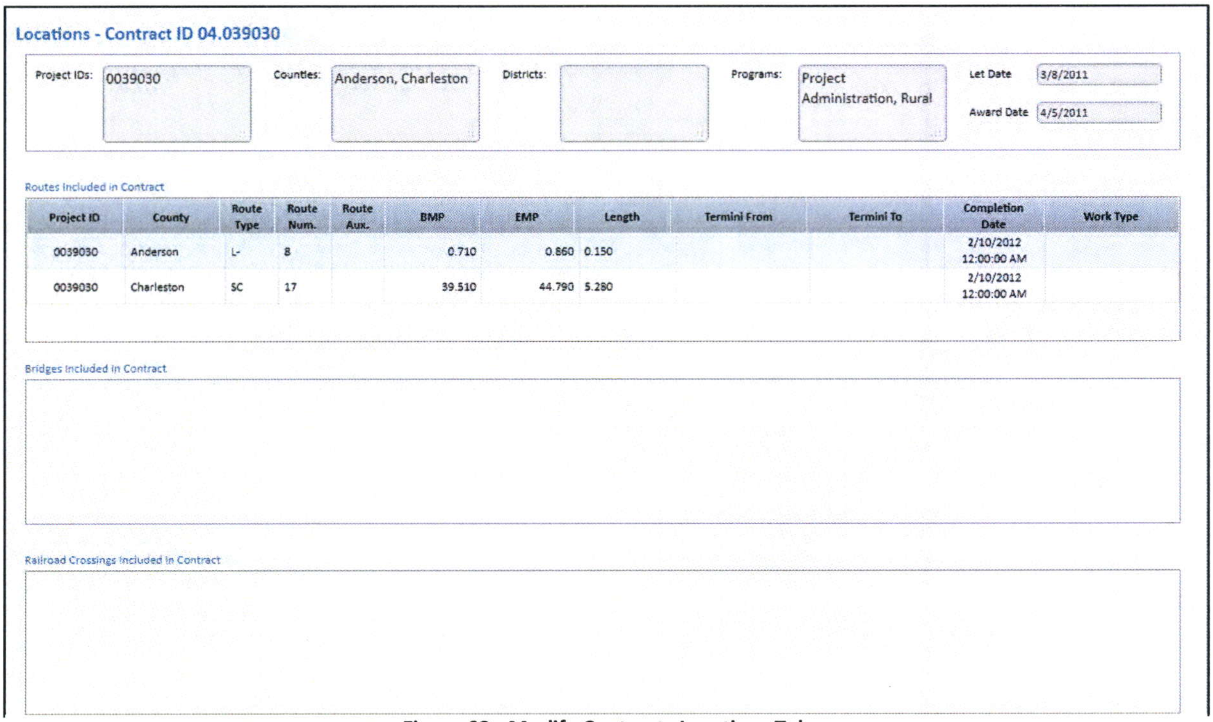


Figure 62 - Modify Contracts Locations Tab

9.6 Management Tab

The **Management** tab shows information about the resident construction and resident maintenance engineers for the contract.

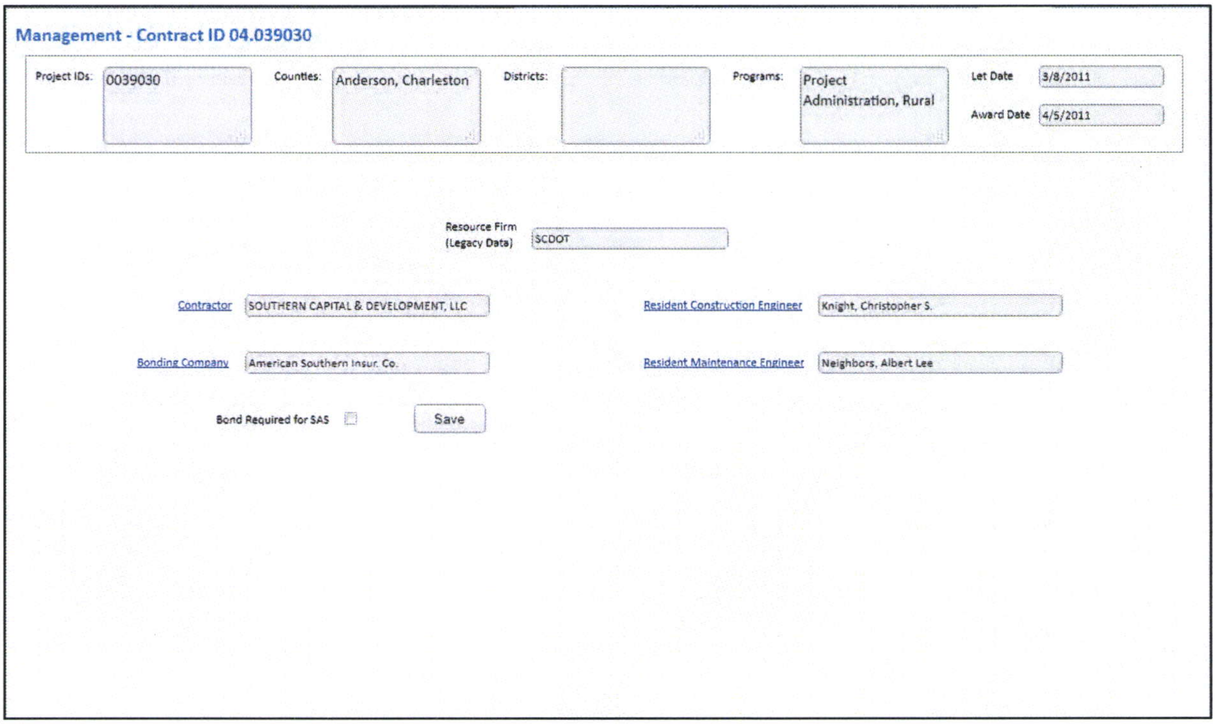


Figure 63 - Modifying Contract Management Tab

Viewing Contractor Information: To view information about the contractor, such as the contractor name, street address, city, state, and zip, click the **Contractor** button.

Viewing Bonding Company Information: To view information about the bonding company, such as the bonding company name, streed address, city, state, and zip, click the **Bonding Company** button.

Viewing Resident Construction Engineer Information: To view information about the resident construction engineer, such as the resident construction engineer name, street, city, state, zip code, work phone number, or cell phone number, click the **Resident Construction** Engineer button.

Viewing Resident Maintenance Engineer Information: To view information about the reisdent manintenance engineer, such as the resident maintenance engineer name, street, city, state, zip code, work phone number, or cellphonr number, click the **Resident Maintenance Engineer** button.

9.7 Change Orders Tab

The **Change Orders** tab shows a list of all of the change orders that have been applied to the contract. This tab replaces the "Open SA" and "Open CMR" links that were in the old card file interface.

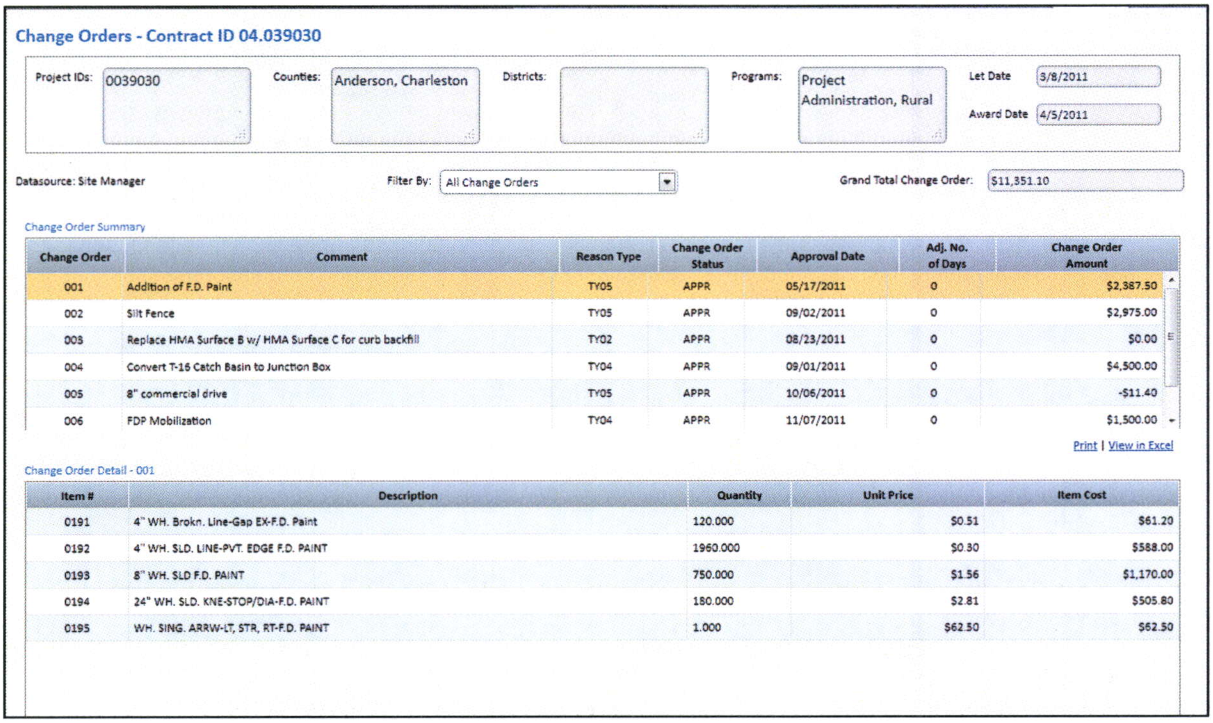


Figure 64 - Modify Contracts Change Orders Tab

Filtering Results: Located above the **Change Order Summary** table is a drop-down menu that allows you to filter any displayed results. You have the option to filter your results by **Has Cost Adjustments, Has Time Adjustments, Has Cost and Time Adjustments,** or **All Change Orders**.

Viewing Change Order Detail: Clicking any order within the **Change Order Summary** table will cause that order to be viewed in more detail in the table below, **Change Order Detail**.

9.8 Claims Tab

The Claims tab will provide the ability to view information pertaining to contract claims. This tab will also be editable by users with Contract Superuser access. All other users will not be able to edit the contents or see the buttons supporting these options.

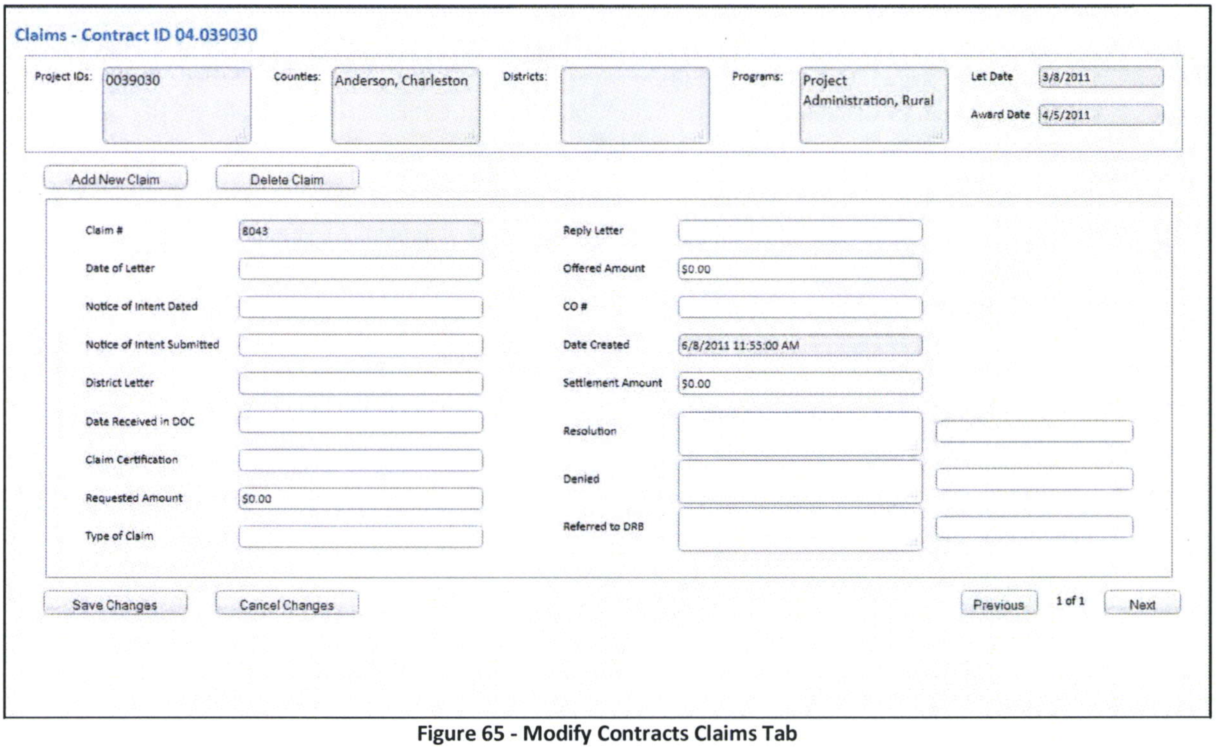


Figure 65 - Modify Contracts Claims Tab

Modifying the Current Claim: You may modify any of the white fields for each claim associated with the contract by clicking on the field and entering in data. Click **Save Changes** or **Cancel Changes** depending on how you wish to handle your modifications.

Adding a New Claim: When selected, a new blank claim record will be created. The user may fill in as many fields as desired and may select the **Save Changes** buttons to write the new record to the database.

Deleting a Claim: When selected, the currently displayed claim will be removed from the database. Prior to actual deletion, a message will display asking the user to confirm the deletion.

Viewing Different Claims: Utilizing the **Previous** and **Next** buttons will display information for other claims associated with the contract.

10. Standard Reports

The standard report screen offers numerous reports available to the user; such as Contract Status Report, Planned Projects Report, Tentative Let List report, and more.

10.1 Search Tab

Each report shares a similar criteria search screen. For this example, we will be using the **Obligations Management PR2 Report**. Regardless of which report you view, you must highlight it in the report menu and click **View Search Criteria**. You may enter in any additional search information that you wish after highlighting your desired report, and click **Search**.

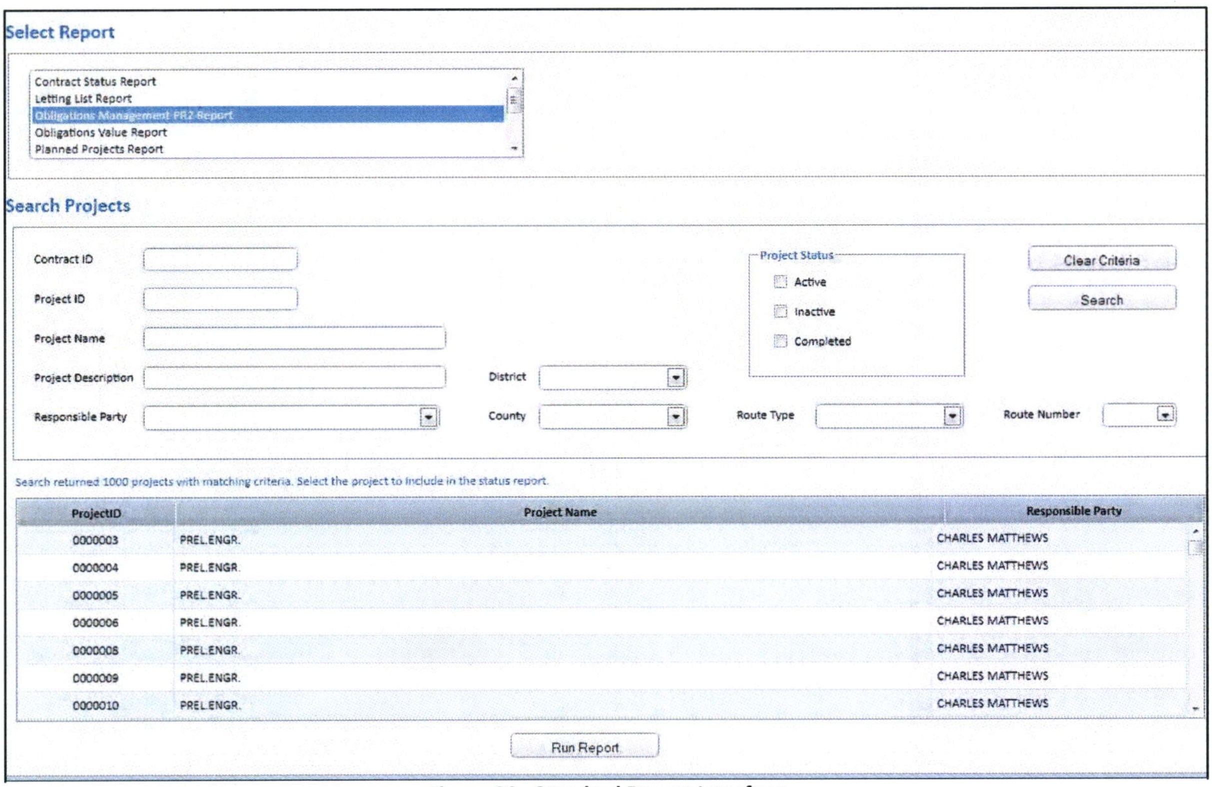


Figure 66 - Standard Report Interface

Simply highlight the project you want to run the report for, and click **Run Report**. *Note:* For some projects, you may be prompted to enter additional remarks. This is optional.

Although it is not required, you are able to enter any remarks about the report before you generate it. Clicking **Generate Report** will continue with the report once all remarks are made (or not). *Note: You may have to enable your pop-up blocker for the report to appear.*

11. Advanced Reports

P2S provides the ability for users to search and query the system from an ad-hoc query and reporting tool called **Advanced Reports**. All pertinent information within the project programming database is available for query. The capability to include logical operators exists for queries, along with several options for output. Users have the ability to select specific columns to be included in the output as well as choose whether the report will be in tabular format (i.e. HTML), displayed on a map, or both.

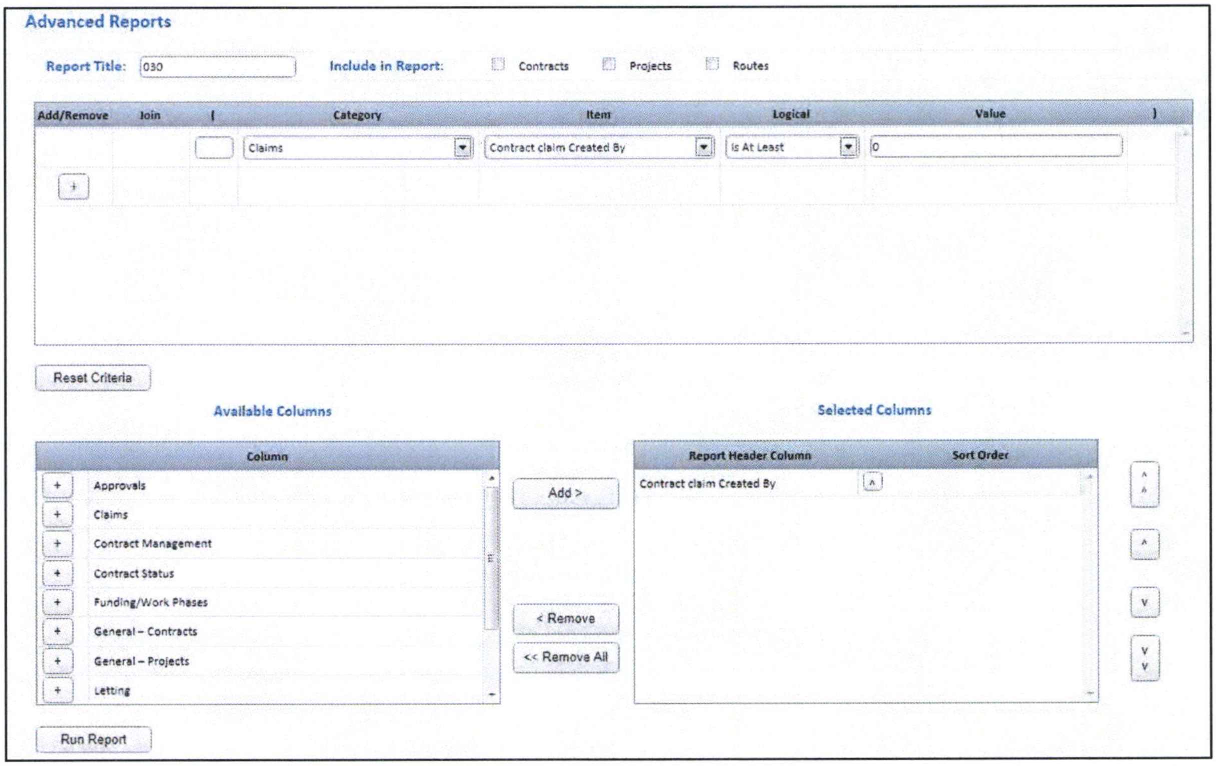


Figure 67 - Advanced Reports Interface

11.1 Constructing a Search

When you begin to construct the report you wish to run, you will need to fill in the query information in the main table, starting from left to right. That is, you would start with the **Category** field and work your way to the right. Once your search information has been entered and there is at least one field in the **Selected Columns** table, the **Run Report** button will be available to click. Clicking it with the above criteria will produce the results shown on the next page. *Note:* You may change the ordering of the columns to be generated by clicking the arrow buttons on the far right. You may also need to disable your popup blocker for the results to show.

South Carolina
Department of Transportation

Date: 2/24/2013
Records: 26
Query Time: Code Gen: 5ms
Query: 198ms
Document: 23ms
Render: 277ms
Total: 12630ms

Search Criteria: **Contract claim Created By Is At Least '0'**

Print | View in Excel | Map Projects | Run Location Conflict Report

Contract claim Created By
913
927
1154
1160
1394
1719
1925
1969
2021
2022
2032
2094
2106
2123
2261
2600
2618
2662
2691
2963
3201
3279
3400

Figure 68 - Example of an Advanced Report

12. Obligations Limitation

Located under the **Funds** tab, **Obligations Limitation** provides the ability to view the obligation limitation for the current or past fiscal years.

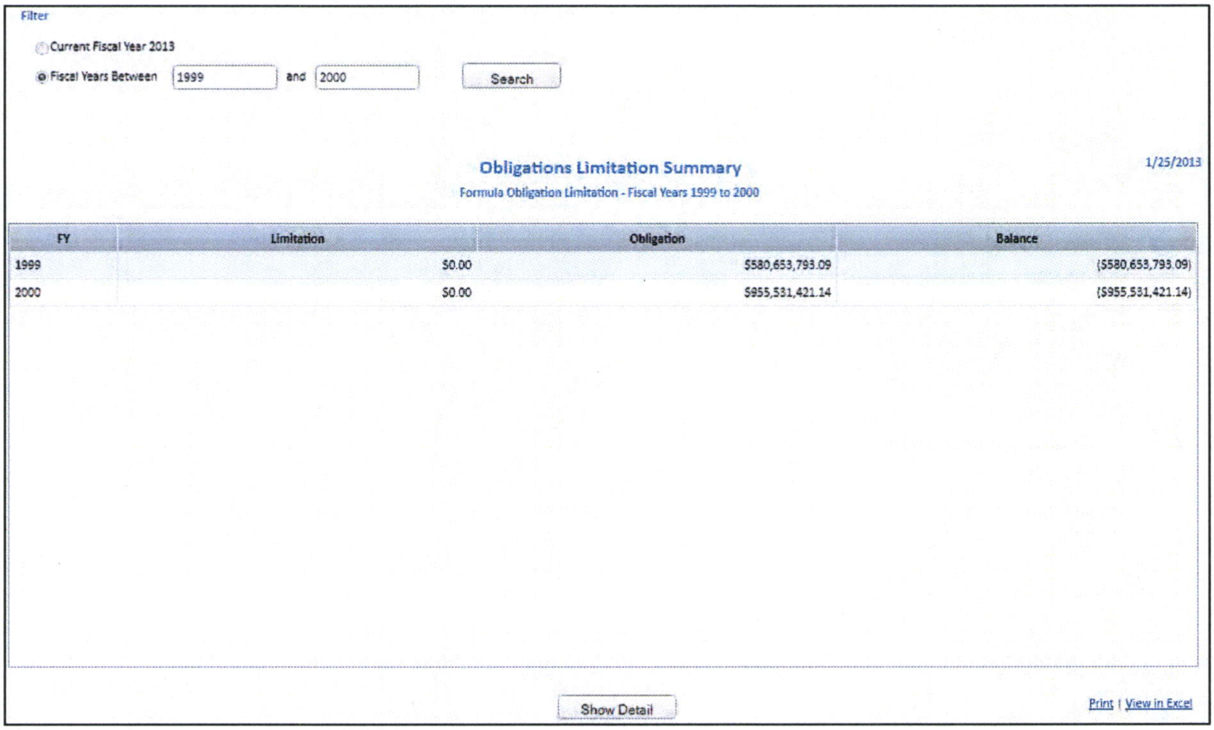
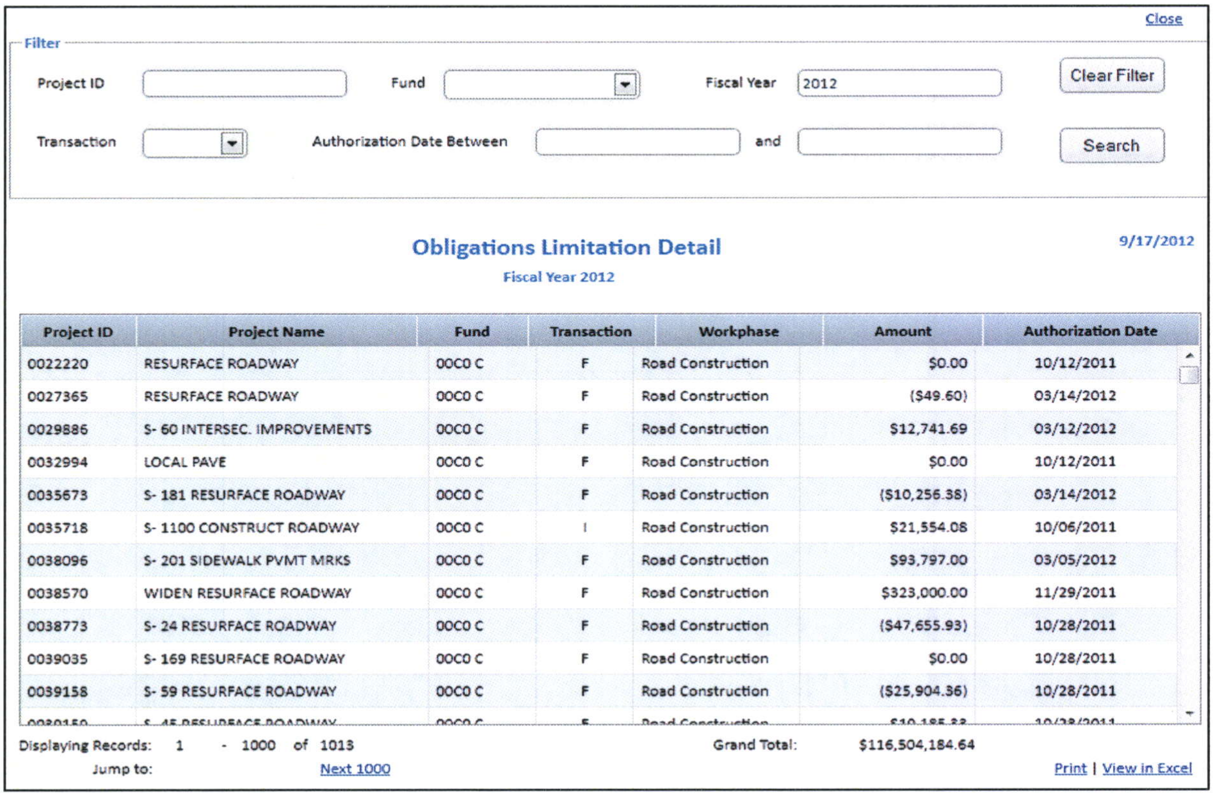


Figure 69 - Obligations Limitation Interface

12.1 Viewing the Limitation

By default, the current year's obligation limitation is shown. You may choose to search for a different range of fiscal years, and can do so by entering the desired years in the **Fiscal Years Between** options. Once done, hit **Search**. The limitation(s) will be shown below, and you may highlight it and click S**how Detail** for more information. A window such as the one on the next page will be displayed.



Project ID	Project Name	Fund	Transaction	Workphase	Amount	Authorization Date
0022220	RESURFACE ROADWAY	00C0 C	F	Road Construction	$0.00	10/12/2011
0027365	RESURFACE ROADWAY	00C0 C	F	Road Construction	($49.60)	03/14/2012
0029886	S- 60 INTERSEC. IMPROVEMENTS	00C0 C	F	Road Construction	$12,741.69	03/12/2012
0032994	LOCAL PAVE	00C0 C	F	Road Construction	$0.00	10/12/2011
0035673	S- 181 RESURFACE ROADWAY	00C0 C	F	Road Construction	($10,256.38)	03/14/2012
0035718	S- 1100 CONSTRUCT ROADWAY	00C0 C	I	Road Construction	$21,554.08	10/06/2011
0038096	S- 201 SIDEWALK PVMT MRKS	00C0 C	F	Road Construction	$93,797.00	03/05/2012
0038570	WIDEN RESURFACE ROADWAY	00C0 C	F	Road Construction	$323,000.00	11/29/2011
0038773	S- 24 RESURFACE ROADWAY	00C0 C	F	Road Construction	($47,655.93)	10/28/2011
0039035	S- 169 RESURFACE ROADWAY	00C0 C	F	Road Construction	$0.00	10/28/2011
0039158	S- 59 RESURFACE ROADWAY	00C0 C	F	Road Construction	($25,904.36)	10/28/2011

Figure 70 - Obligations Limitation Detail

Results may be filtered as desired using any of the filter options at the top of the screen and clicking Search.

13. Apportionments Funds

Apportionments Funds provides the ability to view apportionments for the current or past fiscal years.

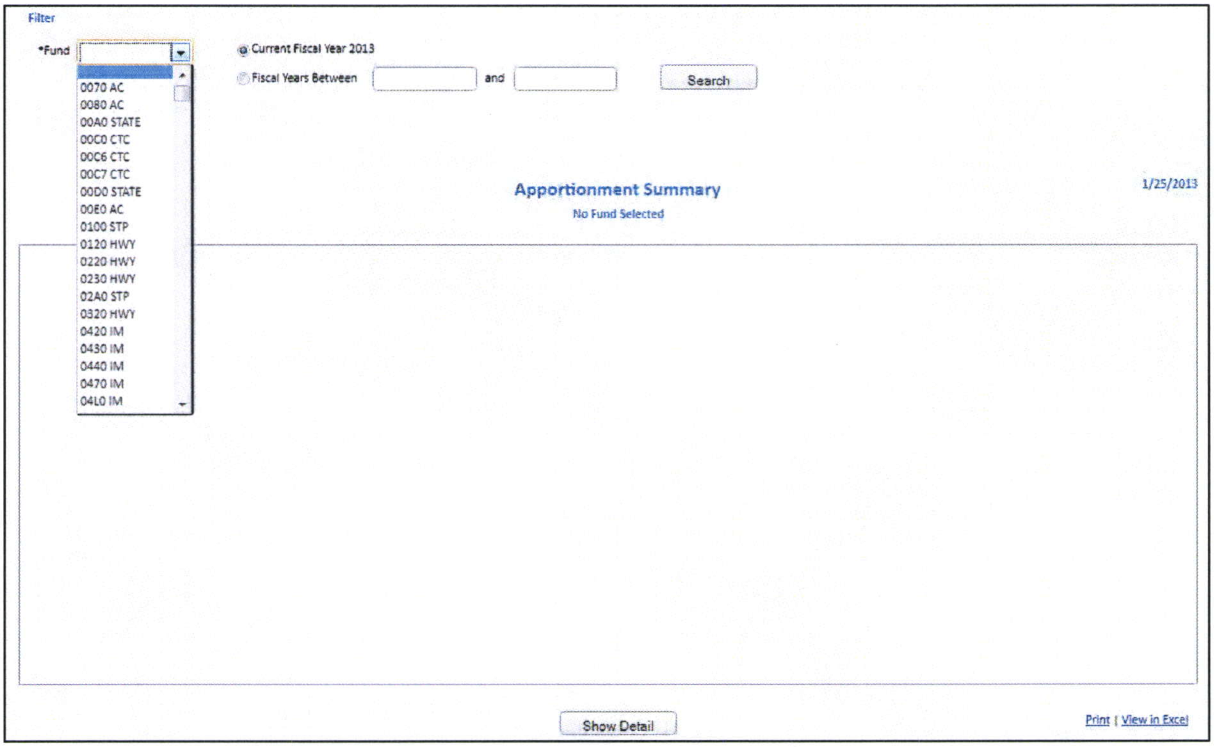


Figure 71 - Apportionments Funds Interface

13.1 Viewing the Apportionments

Similar to the **Obligations Limitation** screen, you will choose your range of fiscal years or select the present fiscal year to search for. You will, however, be required to select a **Fund** type for the **Apportionments Funds** search. Once you have searched, highlighting your option and clicking **Show Detail** will display the screen shown on the next page.

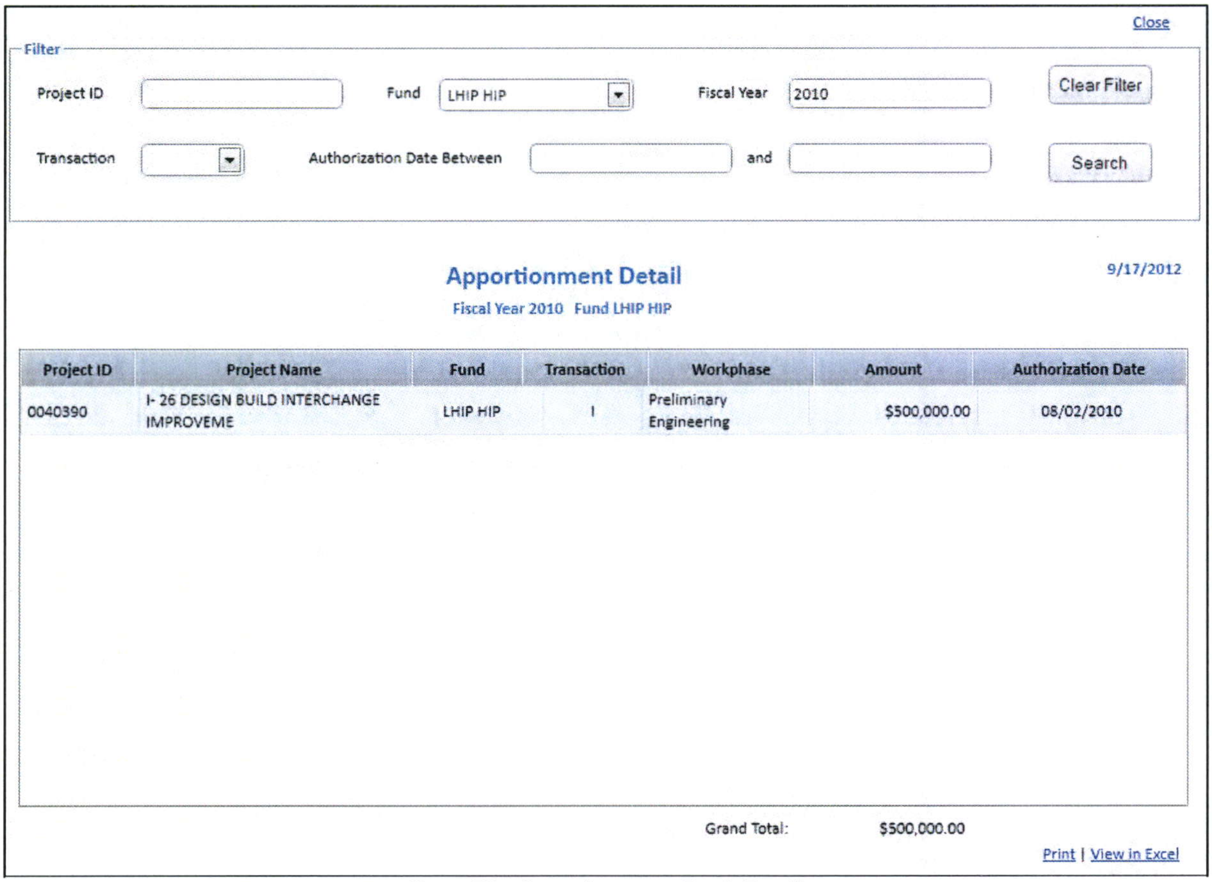


Figure 72 – Apportionments Funds Detail

Results may be filtered as desired using any of the filter options at the top of the screen and clicking Search.

14. System Admin – User Maintenance

User Maintenance allows the ability to modify and create users for P2S. The user's name, division, office, email, and other information can all be entered from this screen.

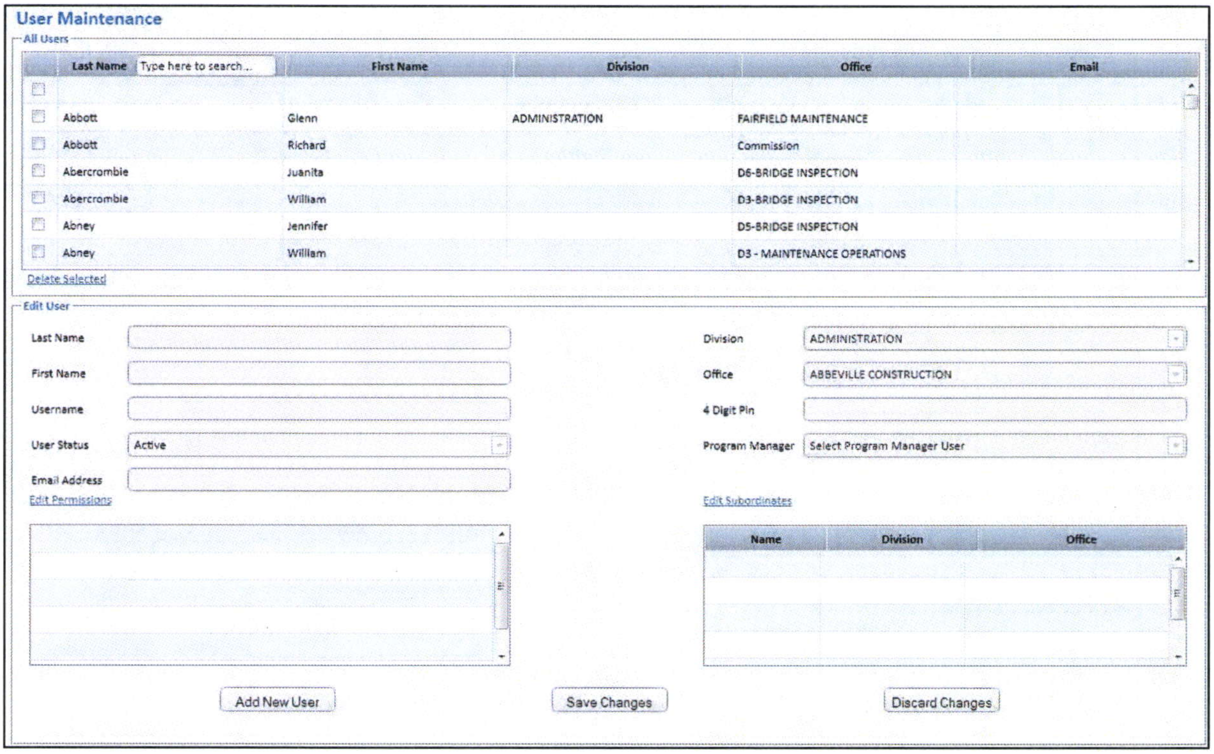


Figure 73 - System Admin - User Maintenance

14.1 Existing Users

Searching for existing users: To search for a user, type in your search criteria directly next to the **Last Name** field at the top left of the **User Maintenance** interface. The search will automatically filter the displayed users.

Editing permissions: To edit the permissions of an existing user, select the user from the list and click the **Edit Permissions** button located under the **Email Address** field in the **Edit User** table. If you have the proper permissions, the menu shown below will be displayed.

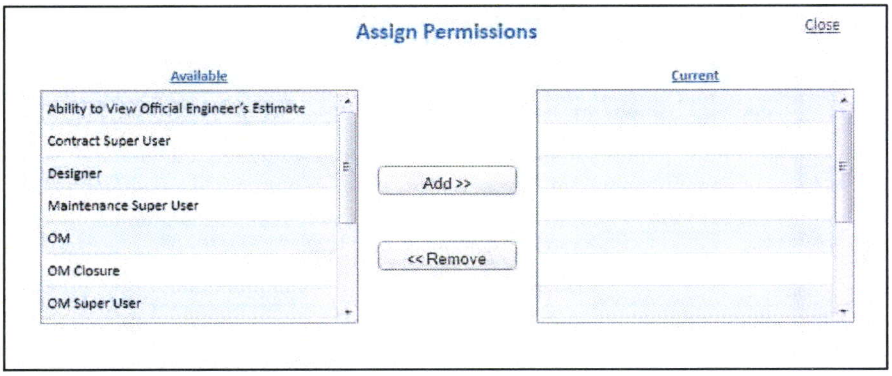


Figure 74 – User Maintenance Assign Permissions Interface

14.2 New Users

Adding New Users: To add a new user, click the **Add New User** button location to the left of the **Save Changes** button. The screen will change slightly, and will remain very similar to the initial **User Maintenance** screen. However, you will notice that **Edit User** has been changed to **Add User – Please enter user information below.**

Enter in the information for the user, including editing their permissions (done in the same way as it is for preexisting users), and click **Save Changes** when all information is present.

15. System Admin – Workflow Maintenance

P2S process of what triggers the requirement for an approval and who gets the request is called a *workflow.* This section describes how to add users to a particular workflow and what changes constitute the need for an approval

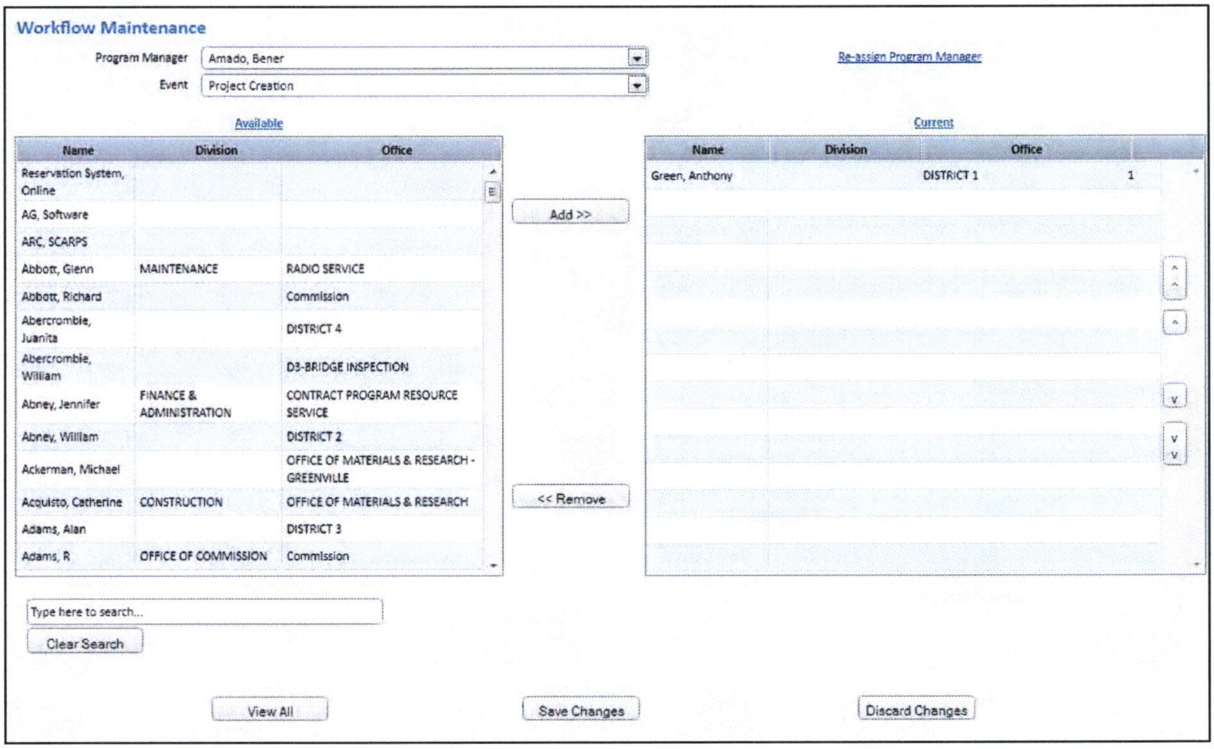


Figure 75 - System Admin Workflow Maintenance Interface

Before a user can be assigned to a workflow, the user must select a **Program Manager** and **Event** (located at the top left of the interface). Once done, you will see the **Available** and **Current** lists will update corresponding to the **Program Manager/Event** pair.

Assigning or Removing workers from a Manager/Event pair: This is as simple as highlighting the user's name in either column, and hitting ADD>> or <<REMOVE to add them to the current list, or remove them, respectively.

Reassigning a Program Manager: To reassign a program manager, clicking the **Re-assign Program Manager** will prompt the screen shown on the next page.

Selecting the new program manager and click **Save & Close**, and confirmation warning will appear on screen. Click **Yes** to save your changes.

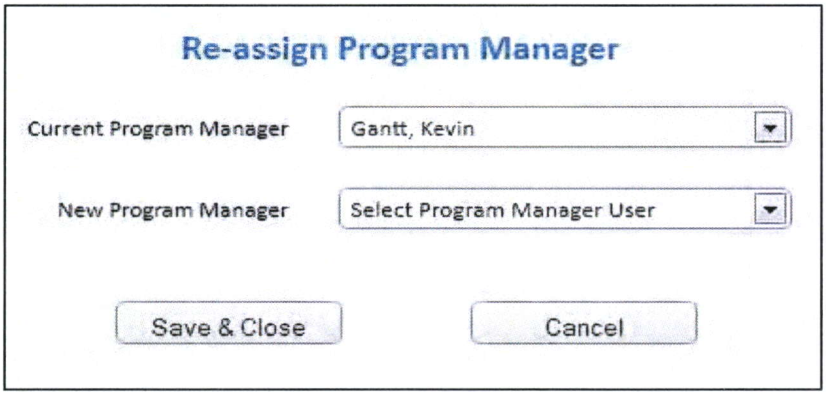


Figure 76 - Workflow Maintenance Re-Assign Program Manager Interface

16. System Admin – Code List Maintenance

This interface provides a system administrator user with the ability to maintain all P2S code lists. A code list is a set of items that have at least two pieces of information: a description and a database "code" that is associated with the description. The purpose of a code list is so that users can be presented with a descriptive text instead of the short database code that is stored in the database table.

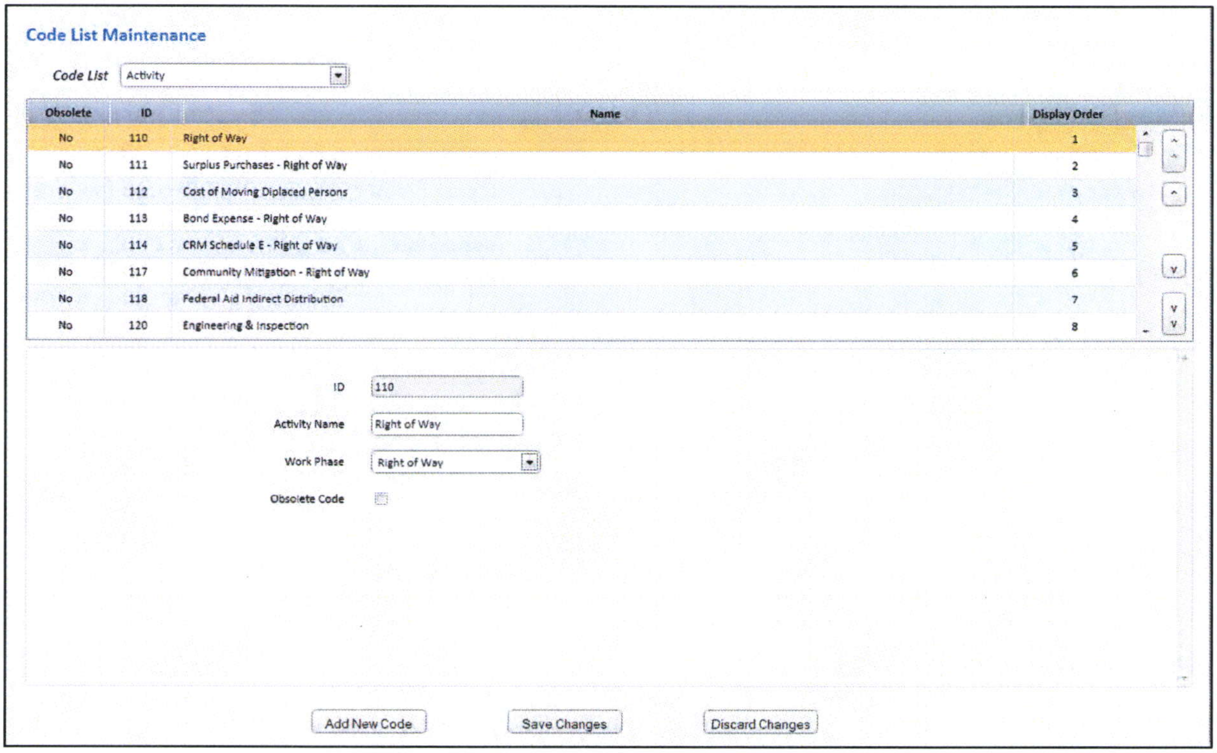


Figure 77 - System Admin Code List Maintenance Interface

Using the Code List: First, you will need to select which code list to view via the **Code List** dropdown menu. The table of codes will update automatically. You may select any code from this table and edit any of its fields, other than its ID. If you wish to add a new code, click **Add New Code**. This will clear all of the fields below the code list table, and allow you to enter in information for a new code. When done, click **Save Changes**.

17. System Admin – Sys. Table Maintenance

The **System Table Maintenance** provides the system administrator with the ability to select how a code list is displayed to the users of P2S, as well as the ability to provide descriptions of each table and column.

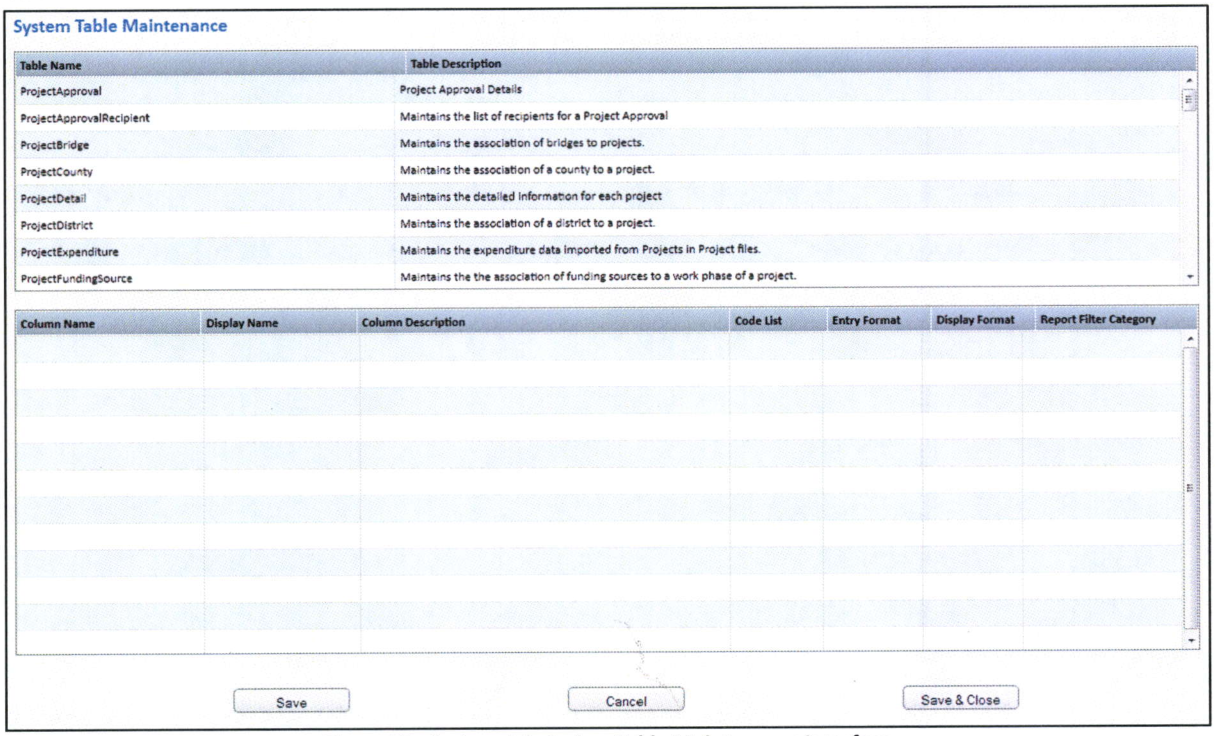


Figure 78 - System Admin Sys. Table Maintenance Interface

On this screen, simply select the **Table** that you wish to edit. Results similar to the image shown on the next page will appear.

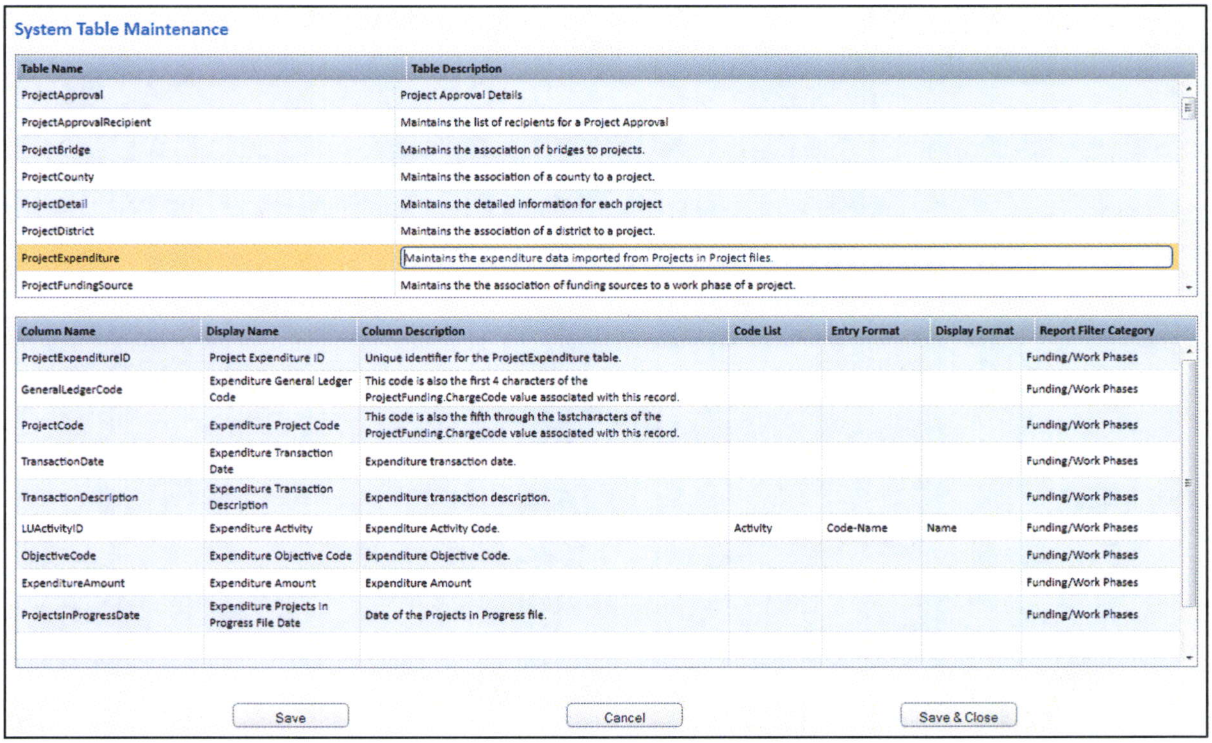


Figure 79 - System Admin Sys. Table Maintenance Results

You can click any field and edit the text, then click **Save** to save your changes. This will update how the table and columns appear to the user.

APPENDIX D

P2S Training Guide

South Carolina Department of Transportation

Lynsee R. Gibson

Access P2S by entering the following URL in Internet Explorer: http://smpvend1/p2s/

1. Home Screen

The Home Screen displays the projects which are of interest to the user. The user has several ways to select which projects are shown by default upon entry to P2S.

1.1 Change Map Display

Summary	Demonstrates how a user can select which projects are shown by default upon entry to P2S
Test Steps	
1. Click the Change Map Display button	
2. Select the County radio button	
3. Select "Richland" from the County drop-down menu	
4. Check the Save for Initial Display checkbox	
5. Click the Refresh Map button	
6. The map zooms to Richland County and shows current projects within the County	
7. Close P2S	
8. Access P2S at http://smpvend1/p2S/	
9. Verify that the map loads at the preselected area of Richland County	

1.2 Map Controls

Summary	Demonstrates how a user can manipulate the map and reset it to its original setting
Test Steps	
1. Click the + button to zoom to Columbia on the map	
2. Click the – button to zoom out on the map	
3. Drag the map to the east to focus on Sumter	
4. Click the Satellite button in the top right corner of the map	
5. Verify that the map switches to satellite image	
6. Hover over the Satellite button and uncheck the Labels checkbox	
7. Verify that the map removes the labels	
8. Click the Reset Map button	
9. Verify that the map reverts to its original state when P2S loads	

1.3 Map Bubble – Project Summary Report

Summary	Demonstrates map bubble functionality and viewing the Project Summary Report
Test Steps	
1. Click the Change Map Display button	
2. Select the Program Manager radio button	
3. Select "Gossett, Chris" from the County drop-down menu	
4. Click the Refresh Map button	
5. Zoom in using the + to Darlington	
6. Click the blue highlighted segment of US 52	
7. Verify that the map bubble shows Project ID: 0029220 (US 52 WIDENING)	
8. Select the Summary Report hyperlink to view a Project Summary Report	
9. Close the Summary Report by clicking the x in the top right corner	

1.4 Map Bubble – ITMS

Summary	Demonstrates map bubble functionality and opening the project in ITMS
Test Steps	
1. Click the Open in ITMS hyperlink	
2. Verify that the Preconstruction Funding Report is opened for Project 0029220	
3. Verify that Project 0029220 is highlighted on the ITMS map	
4. Click the highlighted project and verify that the information is for Project 0029220	
5. Close ITMS	
6. Close the Map Bubble	

1.5 Change PIN (For P2S Approvers Only)

Summary	Demonstrates that a user can change their PIN number for approvals
Test Steps	
1. Click the Change PIN button	
2. Enter the information below: a) Old PIN (default 1111) b) New PIN c) Confirm New PIN	
3. Click the Save button	
4. A window will appear verifying that the PIN was updated successfully, click OK	
5. Click the Close button	

2. Search

The Search function can be used to find project or contract information. All returned data is read-only thru the Search function. Wildcard searches will be performed with any entered data.

2.1 Projects

Summary	Demonstrates how a user can search for projects and view project information
Test Steps	
1. Choose Search → Projects from the top level menu bar	
2. Type "379" in the Project Name field	
3. Select Project ID 0038226 from the Search Results	
4. Click the View Selected Project button	
5. Review associated information on the General tab	
6. Review associated information on the Location tab	
7. Review associated information on the Roads tab	
8. Verify that there are no associated bridges or railroads on the Bridge/RR tab	
9. Review project funding information on the Phases tab	
10. Click on the expenditure hyperlink for Funding Source L1C0 in the Preliminary Engineering phase to display a Detailed Expenditure Report	
11. Choose Export, then Open to view the report in Microsoft Excel If prompted for Username & Password, choose Cancel	
12. Verify that the report opened in Excel	
13. Click on the X in the top right corner to close the Detailed Expenditure Report	
14. Review associated information on the Schedule tab	
15. Click on + next to Environmental to view detailed activities related to the Environmental Document & Permits needed	
16. Review all comments associated with the project on the Remarks tab	
17. To view Legacy PCN, Suffix, File Number, Work Phase, and Federal Project Number information for the P2S project, click on the PPMS tab	

2.2 Contracts/Proposals

Summary	Demonstrates how a user can search for contracts/proposals and view contract information
Test Steps	
1. Choose Search → Contracts/Proposals from the top level menu bar	
2. Type "OGFC" in the Description field	
3. Click on the Let Date field name in the Search results window to Sort in Ascending order	
4. Double click on Contract Number 09.040661 for the Search results	
5. Review associated information on the General tab	
6. Review the Bidder information on the Letting tab	
7. Review the Bid Items and Prices for the Awarded Bidder on the Bid tab	
8. Review Contract Status by Time and Amount on the Status tab	
9. Review the Routes, Bridges and Railroads within the Contract on the Location tab	
10. Review the Contractor, Bonding Company, RCE and DCE for the Contract on the Manage tab	
11. Click on the Resident Construction Engineer to view their contact information	
12. Review Change Order information on the Chg Orders tab	

13. Select "Has Time Adjustments" in the Filter By field to verify that the change orders do not affect the current completion date	
14. Review Claim information on the Claims tab	

2.3 Charge Codes

Summary	Demonstrates how a user can search for charge code information
Test Steps	
1. Choose Search → Charge Codes from the top level menu bar	
2. Type "40394" in the Project ID field	
3. Choose Preliminary Engineering from the Project Phase dropdown	
4. Click Search to return the available SCEIS charge code information including Cost Center, WBS Element, Fund and Functional Area	
5. Verify that the charge codes is displayed with the Obligation, Expenditure, and Variance amounts	
6. Click Reset to clear all search criteria	
7. Choose Search by Contract ID/Project ID	
8. Type "38831" in the Contract ID field	
9. Select Project 0038745 from the available projects within the Contract	
10. Choose Road Construction from the Project Phase dropdown	
11. Review the available charge codes returned in the Search window	
12. Select the record with Fund M001 and choose View Selected Project	
13. Verify that the selected project is shown	

3. Projects → Plan

The project plan tab allows the user to search for and modify information for existing planned projects as well as start planning a new project. Since project information can be edited through the Plan tab, only those projects that the user has access to will be returned in these searches.

3.1 Plan A New Project

Summary	Demonstrates how a user can plan a new project
Test Steps	
1. Select the Projects → Plan menu item	
2. Select the Plan New Project button in the upper right corner	
3. Fill in available fields on the General tab as below: Project Name: P2S Test Project for ***User Name*** Project Description: P2S Project for Training Purposes Only ***User Name*** Full Oversight: Delegated/State Admin. Project Type: Intersection Improvement Work By: SCDOT Proposed Duration: 3 Years, 0 Months Proposed Start Date: Current Month Proposed Letting Date: 7/2014 Is Work Cyclical: No Funding Type: Federal Current Cost Estimate: $1,600,000 Engineering Rank: Not Applicable	
4. Select Save Changes and verify that a message is received stating that Project "Pxxxxxxx" has been created	
5. Note the Project ID here: ______________________________	
6. Click OK	
7. Verify that the Program Project button is now available	
8. Close P2S	

3.2 Search for a Planned Project

Summary	Demonstrates how a user can search for a previously planned project
Test Steps	
1. Access P2S at http://smpvend1/p2s/	
2. Select the Projects → Plan menu item	
3. Type the Project ID noted above in the Project ID search field	
4. Click Search and verify that the project is included in the results table	
5. Highlight the project and click Plan Selected Project	
6. Verify that the Approval Status = In Planning Phase	
7. Click the Office hyperlink at the top right to review the Ownership information for the project	
8. Once finished, click Close Window	

3.3 Edit a Planned Project

Summary	Demonstrates how a user can edit a previously planned project
Test Steps	
1. Select the Roads tab	
2. Select the Intersection Helper from the Road Selection Helpers	
3. Select the County option and Richland County	
4. Select Route Type US Route and Route Number 1	
5. Click Search	
6. Select the Route and Crossing Route for Richland US 21	
7. Select the Add Selected Routes button	
8. Modify the BMP on US 1 to 0.2 and select Add Turn Lane for the Work Type	
9. Modify the BMP on US 21 to 1.0 and select Reconstruction for the Work Type	
10. Select Save Changes	
11. Review the summarized Route data on the Location tab	
12. Close P2S	

4. Projects → Program

The project program tab allows the user to program a previously planned project. A project is said to be programmed when a request to obligate funding has been approved. Since project information can be edited through the Program tab, only those projects that the user has access to will be returned in these searches.

4.1 Program A Project – Phases

Summary	Demonstrates how a user can program work phases and funding for a previously planned project
Test Steps	
1. Access P2S at http://smpvend1/p2s/	
2. Select the Projects → Program menu item	
3. Search Project Name for Test	
4. When the test project is returned, click the Program Selected Project button	
5. Select the Bridge tab	
6. Select the Bridge Helper	
7. Select Richland County	
8. Select Route Type US Route and Route Number 1	
9. Add the first bridge with structure number 4020000100100 to the project	
10. Type 1415 for Bridge Length and 44 for Outside Deck Width	
11. Click to Add Superstructure Type and choose To Be Determined	
12. Click Save Changes	
13. Select the Phases tab	
14. Click the Add New Work Phase/Funding	
15. Fill in the available fields in the Work Phase window as below: Phase: Preliminary Engineering Funding Category: STP Program Category: MPO Program: COATS Improvement Type: 15 Proposed Obligation: *Current Month* Obligation Amount: 60,000	
16. Click Save	
17. Click Add New Work Phase/Funding	
18. Fill in the available fields in the Work Phase window as below: Phase: Road Construction Funding Category: STP Program Category: MPO Program: COATS Improvement Type: 3 Proposed Obligation: 5/2014 Obligation Amount: 1,400,000 Choose the Include in Letting checkbox	
19. Click Save	

20.	Click Add New Work Phase/Funding
21.	Fill in the available fields in the Work Phase window as below: Phase: Engineering & Inspection Funding Category: STP Program Category: MPO Program: COATS Improvement Type: 17 Proposed Obligation: 5/2014 Obligation Amount: 140,000
22.	Click Save and Close
23.	Review the Work Phases and Funding breakdowns on the Phases tab

4.2 Program A Project – Remarks

Summary	Demonstrates how a user can add Remarks to a programmed project
Test Steps	
1.	Navigate to the Remarks tab
2.	In the New Remark text box, add "This is a test remark for this programmed project."
3.	Click Save Changes, and OK to the notification
4.	Verify that the user and date was added to the remark

4.3 Program A Project – Approval

Summary	Demonstrates how a user can initiate the Approval process for a programmed project
Test Steps	
1.	Click the Request Approval hyperlink at the bottom right of the Remarks tab
2.	Add a message to the Approval request and click Send
3.	Click OK to the notification that the request was sent successfully
4.	Click the Approval tab and verify that the Approval request has been sent to the appropriate approvers
5.	Close P2S

NOTE: The project must be approved before continuing to the next step.

6.	Access P2S at http://smpvend1/p2s/
7.	Select Projects → Program and search for the test project
8.	Once selected, choose the Approval tab and verify the Approval History information
9.	Close the Approval History report

5. Proposals

The proposals tab provides the capability to build, modify and transmit proposals for letting. The proposal will consist of a Contract ID, an associated project or set of projects, and other pertinent information such as project location and pay item data.

NOTE: Projects must have a proposed letting date to create a proposal. When combining projects into a single proposal, they must all have the same proposed letting date.

5.1 Build a Proposal

Summary	Demonstrates how a user can build a proposal for letting
Test Steps	
1. Select the Proposals → Build menu item	
2. In the Proposed Let Date field, enter 7/2014 and click Search	
3. Highlight the test project that was created earlier and choose >Add Selected Projects>	
4. Add a Proposal Description of "P2S Test Proposal for ***User Name***"	
5. Click Build Proposal	
6. Verify that the proposal has been created and note the Contract ID here: ____________________	

5.2 Modify a Proposal

Summary	Demonstrates how a user can modify a proposal for letting
Test Steps	
1. Select the Proposals → Modify menu item	
2. In the Proposal ID field, fill in the ID above and click Search	
3. Highlight the test proposal and select Modify	
4. In the Proposal Description field add "in Richland County" to the existing description	
5. Click Modify Proposal	
6. Verify that the proposal was updated	

5.3 Add Pay Items to a Project in a Proposal

Summary	Demonstrates how a user can add pay items to a project
Test Steps	
1. Select the Projects → Program menu item	
2. On the Search tab, search for the test project that was created earlier and click the Program Selected Project	
3. Navigate to the Pay Items tab	
4. Verify that the Spec Book Year is 2007	
5. Add a Category Description named "Roadway Items"	
6. Add a Category Length of 0.27 and a Federal Construction Class of 2	
7. In the Items table, add Item # 1031000 for Moblization with an Estimated Qty of 1	
8. To add other additional items, click the magnifying glass to filter pay items	
9. Type "Excavation" in the Item Description field and click Search	
10. Select Item #'s 2031000 and 2033000 and click the Use Selected Items button and the bottom of the screen	
11. For Pay Item # 2031000 add an Estimated Qty of 25, for Pay Item # 2033000 add an Estimated Qty of 1970	
12. Select Pay Items Ready for Transmittal	
13. Click Save Changes	

6. Reports – Standard Reports

The standard report screen offers numerous reports available to the user. Each report shares a similar criteria search screen.

6.1 Contract Status Report

Summary	Demonstrates how a user can generate a Contract Status report from P2S
Test Steps	
1. Choose Reports → Standard Reports from the top level menu bar	
2. Verify that Contract Status Report is highlighted in the list of available standard reports	
3. Select "Lexington" from the County dropdown	
4. Select "UNITED CONTRACTORS, LLC" from the Contractor field	
5. Click Search	
6. Check the box next to Contract Number to select all returned contracts	
7. Click Run Report	
8. Verify that the returned pdf report contains a report for each contract selected	
9. Close the report window	

6.2 Letting List Report

Summary	Demonstrates how a user can generate a Letting List report from P2S
Test Steps	
1. Choose Letting List Report from the list of available standard reports	
2. Click in the Letting Month box and use the calendar to navigate to September 2013	
3. Choose any date on the calendar to select this month	
4. Click Run Report	
5. Review the proposal and project information in the report	
6. Close the report window	

6.3 Planned Projects Report

Summary	Demonstrates how a user can generate a Planned Projects report from P2S
Test Steps	
1. Select the Planned Projects Report from the list of available standard reports	
2. Click Run Report to return all projects in the Planning phase	
3. Verify that the report is generated in pdf format	
4. Close the report window	

6.4 Programmed Projects Report

Summary	Demonstrates how a user can generate a Programmed Projects report from P2S
Test Steps	
1. Select the Programmed Projects Report from the list of available standard reports	
2. Select "RPG 1 – Lowcountry" from the Office dropdown menu	
3. Click the Run Report button	
4. Verify that the report is generated in pdf format	
5. Close the report window	

6.5 Project Financial Report

Summary	Demonstrates how a user can generate a Project Financial report from P2S
Test Steps	
1. Select the Project Financial Report from the list of available standard reports	
2. Select "Klauk, Brian" from the Responsible Party dropdown	
3. Select "York" from the County dropdown	
4. Click "Active" in the Project Status window	
5. Click the Search button	
6. Choose Project ID 0038511 from the returned projects list	
7. Click the Run Report button	
8. Verify that the report is generated in pdf format	
9. Close the report window	

6.6 Project Location Conflict Report

Summary	Demonstrates how a user can generate a Project Location Conflict report from P2S
Test Steps	
1. Select the Project Location Conflict Report from the list of available standard reports	
2. Select "All" under the Project Phase window	
3. Select "All" under the Federal Aid window	
4. Select "Charleston" from the County dropdown under the Region window	
5. Click the Run Report button	
6. Verify that the report is generated in pdf format	
7. Close the report window	

7. Reports – Advanced Reports

P2S provides the ability for users to search and query the system using an ad-hoc query and reporting tool. All pertinent information within the project programming database is available for query. The capability to include logical operators exists for queries, along with several options for output.

Summary	Demonstrates how the features of Advanced Reports can be utilized
Test Steps	
1. Choose Reports → Advanced Reports from the top level menu bar	
2. Key in a Report Title of Test Report for ***User Initials***	
3. From the Add to Report buttons, click the Projects button	
4. Select a Filter Category of Funding/Work Phases	
5. Select an Item of Funding Transaction Authorization Date	
6. Select a Logical operator of Is Greater Than	
7. Enter a value of "09/30/2011"	
8. Click the + button to add a Join to the query	
9. Select a Filter Category of Funding/Work Phases	
10. Select an Item of Funding Transaction Authorization Date	
11. Select a Logical operator of Is Less Than	
12. Enter a value of "10/01/2012"	
13. Click the + button to add a Join to the query	
14. Select a Filter Category of Location	
15. Select an Item of Route Study Area	
16. Select a Logical operator of Equals	
17. Enter a value of "ARTS"	
18. From the Available Columns, choose Funding/Work Phases	
19. Double click Funding Transaction Obligation Amount to add it to the report	
20. Double click Funding Transaction Program to add it to the report	
21. In the Selected Columns table, Remove Route Study Area as a column in the report	
22. Move Funding Transaction Program after Project Description by using the ^ button to the far right	
23. Select Run Report	
24. Verify that the report is generated in pdf format	
25. Close the report window	

Summary	Demonstrates how the features of Advanced Reports can be utilized
Test Steps	
1. Choose Reset Criteria and Remove All Selected Columns	
2. Key in a Report Title of Test Report #2 for ***User Name***	
3. From the Add to Report buttons, click the Contracts button	
4. Select a Filter Category of Contract Details	
5. Select an Item of Contract ID	
6. Select a Logical operator of Contains	
7. Enter a value of "4.103"	
8. Click the + button to add a Join to the query	
9. Select a Filter Category of Change Orders	
10. Select an Item of Change Order Amount	
11. Select a Logical operator of Exists	

12. From the Available Columns, choose Change Orders
13. Double click Change Order Number, Change Order Status and Change Order Description to add them to the report
14. Remove Contract ID and Contract Description from the Selected columns by highlighted them and clicking the Remove button
15. Move Change Order Number to the top of the list and verify that it is sorted in Ascending order
16. Select Run Report
17. Verify that the report is generated in pdf format
18. Close the report window

Summary	Demonstrates how the features of Advanced Reports can be utilized
Test Steps	
1. Choose Reset Criteria and Remove All Selected Columns	
2. Key in a Report Title of Test Report #3 ***User Name***	
3. From the Add to Report buttons, click the Projects button	
4. Select a Filter Category of Project Details	
5. Select an Item of Project ID	
6. Select a Logical operator of Contains	
7. Enter the Project ID of the test project created earlier	
8. From the Available Columns, choose Pay Items	
9. Double click Pay Item, Pay Item Category and Pay Item Estimated Quantity to add them to the report	
10. In the Selected Columns table, Remove Project ID, Project Name and Project Description from the report	
11. Move Project Pay Item Category to the top	
12. Select Run Report	
13. Verify that the report is generated in pdf format	
14. Click the View In Excel option, select Open to view the report in Microsoft Excel If prompted for Username & Password, choose Cancel	
15. Close the report window	

Code List Reference

ID	Funding Category	Funding Type
APD	Appalachian Development	Federal
ARR	American Recovery & Reinvestment Act	Federal
BR	Bridge	Federal
BRD	Bridge Discretionary	Federal
CAQ	Congestion Mitigation & Air Quality	Federal
CTC	County Transportation Committee	Other
EBS	Equity Bonus	Federal
ENH	Enhancement	Federal
ER	Emergency Relief	Federal
FH	Forest Highways	Federal
FL	Federal Lands	Federal
FTA	Federal Transit Authority	Federal
HPP	High Priority (Earmark)	Federal
HSP	Highway Safety Program	Federal
IM	Interstate Maintenance	Federal
IMD	Interstate Maintenance Discretionary	Federal
LOC	Local Funds	Other
MTN	State Maintenance Funds	State
NCB	National Corridor Border	Federal
NHP	National Highway Performance	Federal
NHS	National Highway System	Federal
NSB	National Scenic Byways	Federal
OAF	Other Allocated Funds	Federal
RHP	Railroad Hazard Protective Devices	Federal
RTP	Recreational Trails	Federal
SIB	State Infrastructure Bank	Other
SPR	Statewide Planning & Research	Federal
SRS	Safe Routes to School	Federal
STF	State Funds	State
STP	Surface Transportation Program	Federal
TAP	Transportation Alternatives Program	Federal

ID	Program Category	Associated Programs
BR	Bridge	Bridge Deck Repair Inspection Painting Rehabilitation Replacement (On-System) Replacement (Off-System)
CM	CMAQ	CMAQ Mandatory Non-Mandatory
INT	Interstate	Interstate Rehabilitation Upgrade Cable Barrier Guardrail ITS Signing & Marking Debt Service Rest Areas
P&R	Pavement & Reconstruction	Pavement & Reconstruction Guardrail Repair Open Graded Friction Course Resurfacing Signal Upgrades Signing & Marking
PL	Planning	Planning
RHPD	RR Crossings	RR Highway Protective Devices
SA	Safety	Safety Intersection Improvements Section/Corridor Improvements Signing & Marking Signal Upgrades RR Hazard Elimination Interstate Safety Improvements SRTS Statewide Rumble Strips Special Safety Projects
COG	Rural System Upgrade	Rural System Upgrade Appalachian BCD Catawba Central Midlands Lowcountry Lower Savannah Pee Dee Santee Lynches Upper Savannah Waccamaw Debt Service

MPO	Urban System Upgrade	Urban System Upgrade ANATS ARTS CHATS COATS FLATS GPATS GSATS RFATS SPATS SUATS Debt Service
TIB-P	SCTIB Payments	SCTIB Payments
TAP	Transportation Alternatives	Areas > 200K Areas >5K & <200K Areas <5K
FM	Federal Match	Federal Match
ENH	Enhancement	Enhancement Adopt-An-Interchange Bicycle & Pedestrian MPO Rural Sidewalk / ADA Ramps Project Administration
FL	Federal Lands	Federal Lands Appalachian Development Forest Highways
EM	Earmark	Earmark Appropriation Corridor of the Future SAFETEA-LU TIGER Grant TIGER II Grant TIGER III Grant Scenic Byways Discretionary Grant Emergency Relief
ARR	ARRA	ARRA Bridge Enhancement Interstate Local Resurfacing Safety
PP	Previous Programs	Previous Programs ARRA Overruns
PIPP	Pavement Improvement & Preservation	Maintenance Resurfacing Preservation
SF	State Funds	State Funded Project State Funded Safety
CTC	C Program	C Program
LOC	Local	Local Sales Tax
TIB	SCTIB	TIB

ID	FMIS Improvement Type
1	New Construction
3	4R Reconstruction Added Capacity
4	4R Reconstruction No Added Capacity
5	4R Maintenance Resurfacing
6	4R Maintenance Restoration & Rehabilitation
7	4R Maintenance Relocation
8	Bridge New Construction
10	Bridge Replacement – Added Capacity
11	Bridge Replacement – No Added Capacity
13	Bridge Rehabilitation – Added Capacity
14	Bridge Rehabilitation – No Added Capacity
15	Preliminary Engineering
16	Right of Way
17	Construction Engineering
18	Planning
19	Research
20	Environmental Only
21	Safety
22	Rail/Highway Crossing
23	Transit
24	Traffic Management Engineering-HOV
25	Vehicle Weight Enforcement Program
26	Ferry Boats & Facilities
27	Administration
28	Facilities for Pedestrians & Bicycles
30	Scenic or Historic Highway Programs
31	Landscaping & Other Scenic Beautification
32	Historic Preservation
34	Preservation of Abandoned Railway Corridors
35	Control & Removal of Outdoor Advertising
36	Archaeological Planning & Research
38	Safety & Education for Pedestrians/Bicyclists
39	Establishment of Transportation Museums
40	Special Bridge
41	Youth Conservation Service
42	Training
43	Utilities
44	Other
45	Debt Service
46	Design Build Contract
47	Bridge Preventative Maintenance
48	Bridge Protection
49	Bridge Inspection and Related Training
50	New Tunnel
51	Tunnel Replacement
52	Tunnel Rehabilitation
53	Tunnel Preservation
54	Tunnel Protection
55	Tunnel Inspection and Related Training
56	Other Asset Inspection
57	Safety-Non-Infrastructure

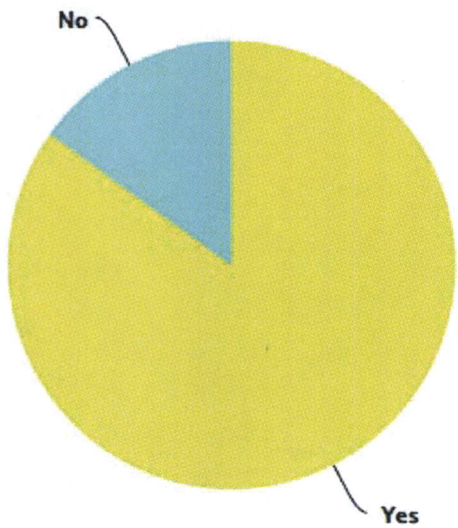
APPENDIX E

P2S Survey

Q1 Customize Export ▾

Have you used the new P2S (Project Programming System)?

Answered: 100 Skipped: 0



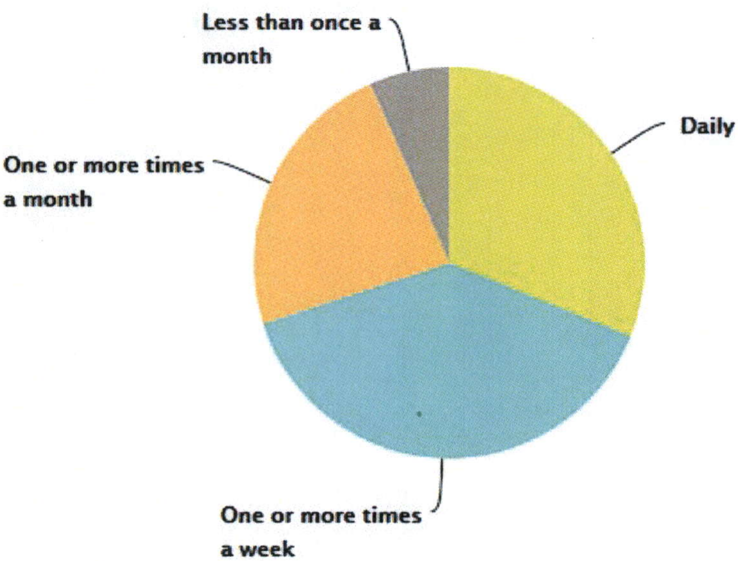
Answer Choices	Responses	
Yes	85%	85
No	15%	15
Total		100

Q2

Customize Export

How often do you use the P2S application?

Answered: 90 Skipped: 10

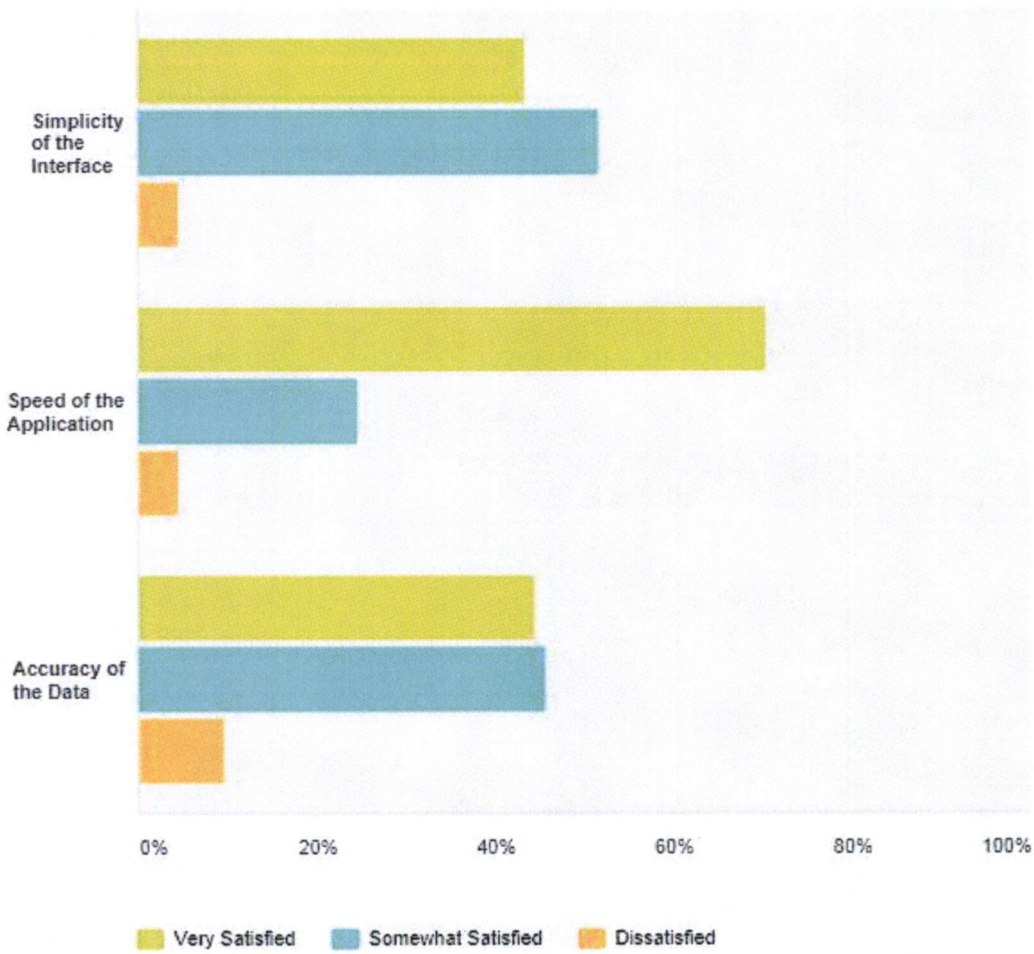


Answer Choices	Responses	
Daily	31.11%	28
One or more times a week	38.89%	35
One or more times a month	23.33%	21
Less than once a month	6.67%	6
Total		90

Q3 Customize Export

With regards to the P2S application, how satisfied have you been with the following?

Answered: 85 Skipped: 15



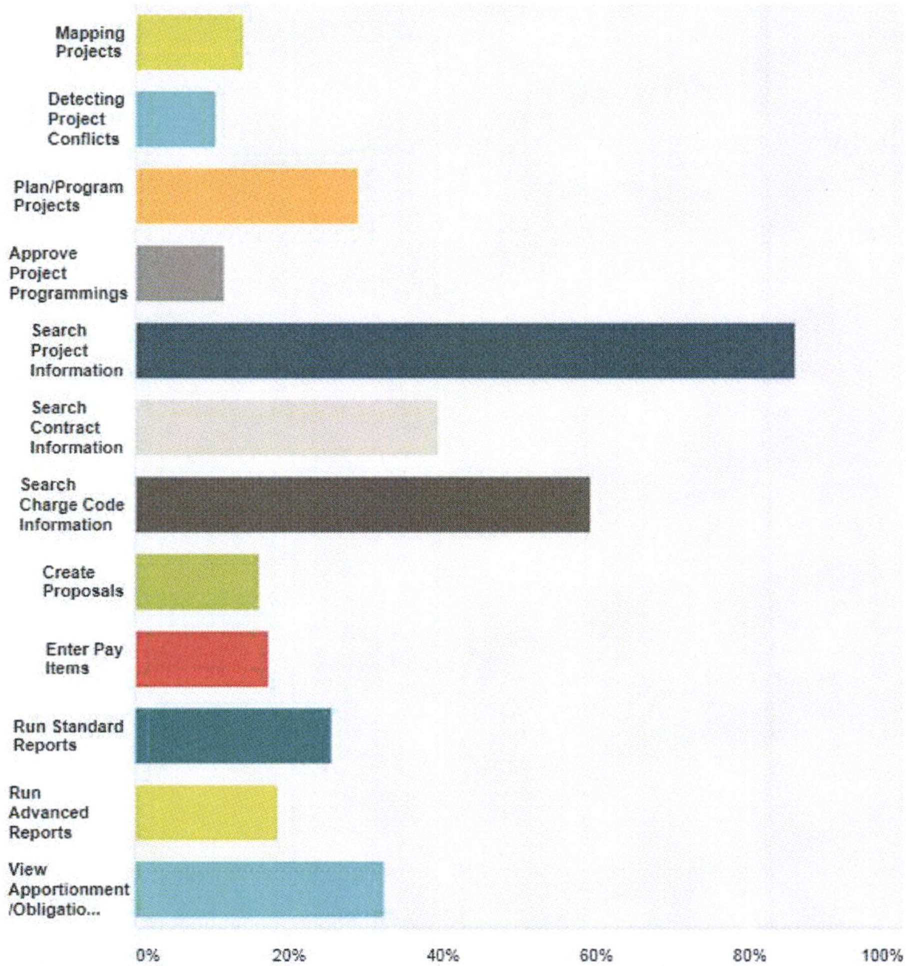
	Very Satisfied	Somewhat Satisfied	Dissatisfied	Total
Simplicity of the Interface	43.53% 37	51.76% 44	4.71% 4	85
Speed of the Application	70.59% 60	24.71% 21	4.71% 4	85
Accuracy of the Data	44.58% 37	45.78% 38	9.64% 8	83

Q4

Customize Export

What do you primarily use P2S for? Select all that apply.

Answered: 86 Skipped: 14



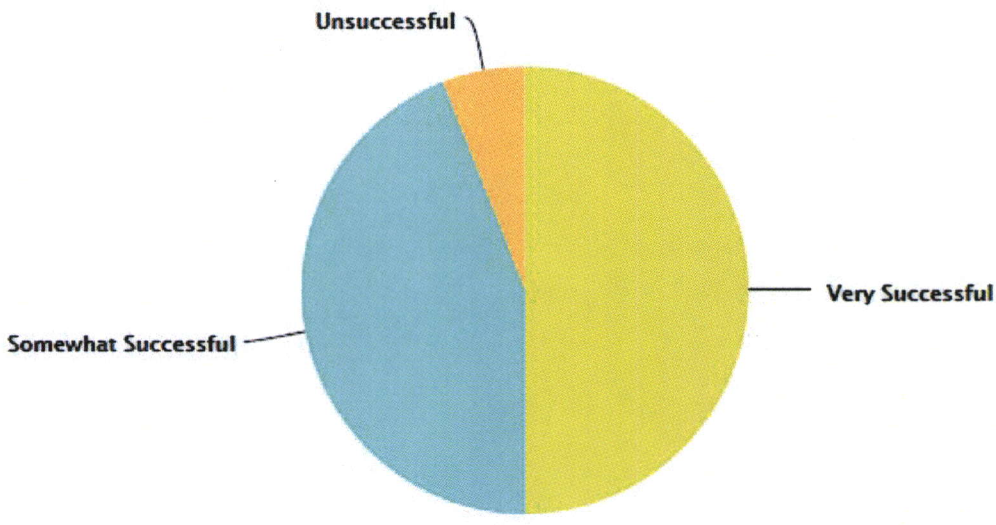
Answer Choices	Responses	
Mapping Projects	13.95%	12
Detecting Project Conflicts	10.47%	9
Plan/Program Projects	29.07%	25
Approve Project Programmings	11.63%	10
Search Project Information	86.05%	74
Search Contract Information	39.53%	34
Search Charge Code Information	59.30%	51
Create Proposals	16.28%	14
Enter Pay Items	17.44%	15
Run Standard Reports	25.58%	22
Run Advanced Reports	18.60%	16
View Apportionment/Obligation data	32.56%	28
Total Respondents: 86		

Q5

Customize Export

How successful has P2S been in meeting your intended use?

Answered: 84 Skipped: 16



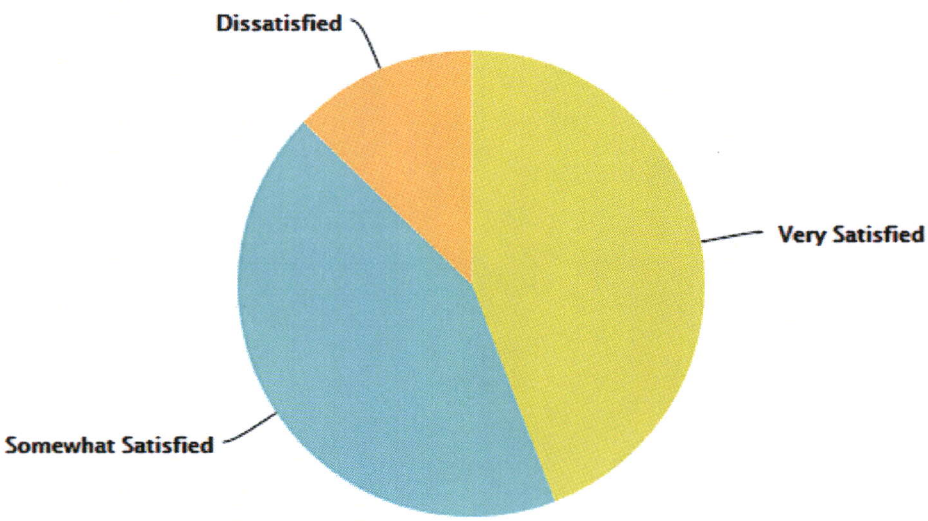
Answer Choices	Responses	
Very Successful	50%	42
Somewhat Successful	44.05%	37
Unsuccessful	5.95%	5
Total		84

Q6

Customize Export

How satified were you with the launch and implementation of the new application?

Answered: 86 Skipped: 14



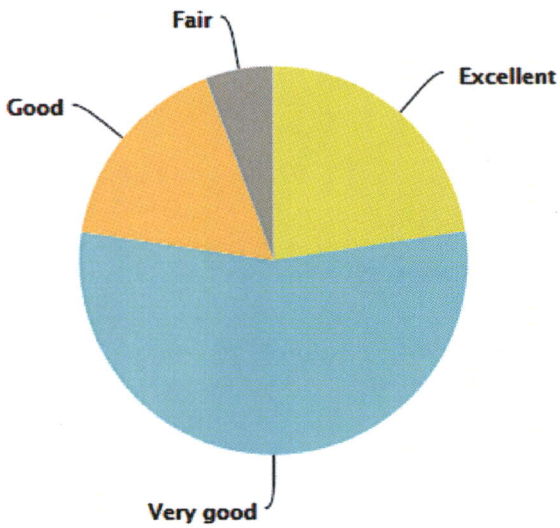
Answer Choices	Responses	
Very Satisfied	44.19%	38
Somewhat Satisfied	43.02%	37
Dissatisfied	12.79%	11
Total		86

Q7

Customize Export

If you attended a P2S training class prior to implementation, how would you rate the course overall?

Answered: 53 Skipped: 47



Answer Choices	Responses	
Excellent	22.64%	12
Very good	54.72%	29
Good	16.98%	9
Fair	5.66%	3
Poor	0%	0
Total		53

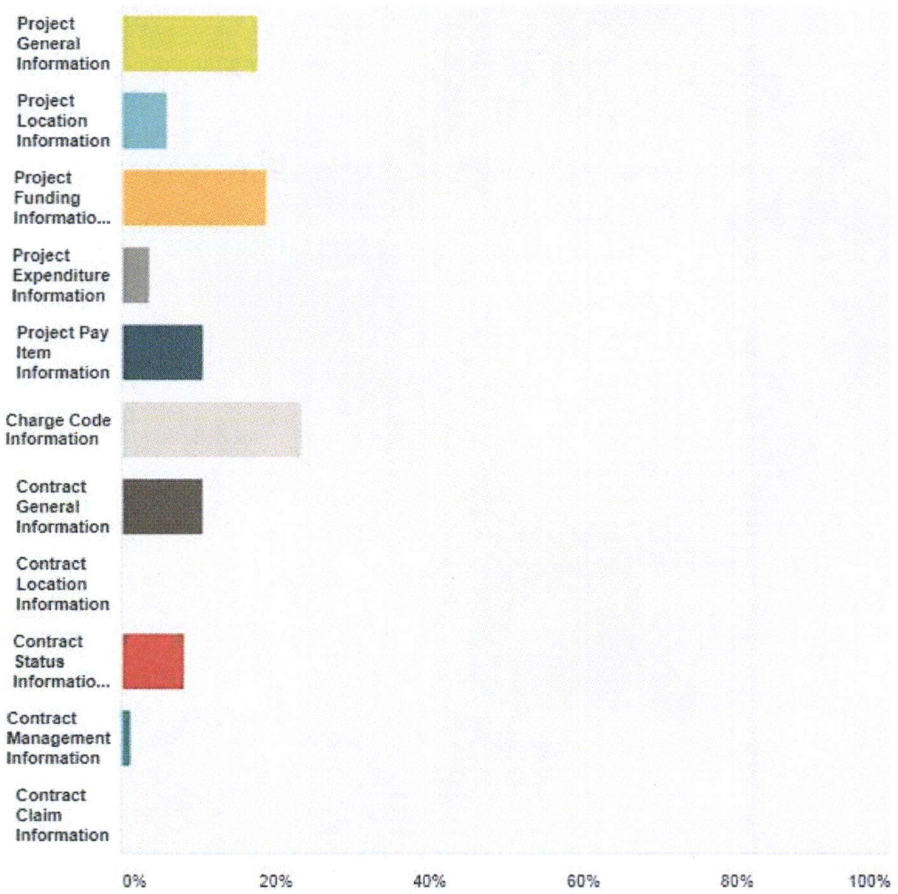
Q8

Customize

Export

What information/data in P2S is the most useful to you?

Answered: 85 Skipped: 15



Answer Choices	Responses	
Project General Information	17.65%	15
Project Location Information	5.88%	5
Project Funding Information (Obligations)	18.82%	16
Project Expenditure Information	3.53%	3
Project Pay Item Information	10.59%	9
Charge Code Information	23.53%	20
Contract General Information	10.59%	9
Contract Location Information	0%	0
Contract Status Information (Key Dates)	8.24%	7
Contract Management Information	1.18%	1
Contract Claim Information	0%	0
Total		85

Q9 Export

How can P2S be improved to make it more useful and/or efficient?

Answered: 41 Skipped: 59

1. Grandfathering in all the information from WebTransport, Sharepoint, and PES so that it is accessible in P2S.
2. Show all obligations past and future in the "key dates" box on the "general" project tab. Add the "map project button" to the location tab.
3. Combine the project information and charge code information. Once you find the project, you don't have the search for the charge code too.
4. More training
5. For alot of my job responsibilities having the apportionments fix implemented would be very helpful.
6. I realize that there are several charge codes and to use the highest varience. However not everyone may know that.
7. the obligation and authorization date is confusing bc there never seems to be anything under obligation date and we used to refer to everthing as obligation date
8. charge codes- PE or bridge or Road
9. Not all contract ID's are searchable. Often times I have to enter the project number to find a code. 2) Would be nice to search by charge objects; could help double check our codes. 3) Set up EI charge codes for all jobs. 4) Have a help desk/contact for folks that can't find certain projects/contracts/codes. 5) Set up a link/event for a class. Lot of folks are still feeling in the dark regarding this application. 6) Work with accounting to ensure codes are meeting their needs. Help them update their system for new codes. 7) Need a set of guidelines on what folks can/can't charge to. 8) How will vehicle mileage be handled with new codes?
10. pay item input and proposal creation could be improved
11. Have the apportionment screens working for all fund codes and have the entry boxes avaialable to update for all years back to 2000.
12. One must enter the pin again to get the charge codes. It should be as simple as enter the pin and look at all tabs. Make a tab for RW obligation, Construction Obligation, and Let date.
13. Check the accuracy of the mapping of the Projects. A few project do not appear in the proper location. Included an area for % Constructed and Planned Finished Construction date.
14. retain the assignment of the File Number with the 2 digit county code.
15. make sure all roads are listed on each project
16. Make sure it includes the old card file projects.
17. Provide training in the districts.

18. I think the concept is a good one. There have been many problems with it and its integration with CBES. Also, the Project ID's are sequentially generated and the numbers are not associated with counties. I like the File Number system better. Also, when exporting a project from CBES back to P2S, it often doesn't bring the info from CBES in correctly, or it duplicates routes when there are more than one Section in CBES. Also, there are occasions where the search for Conflicting Routes is not accurate. For example, sometimes P2S will return a "No Conflicting Routes" message, when there are conflicting routes or portions of conflicting routes. The point of this is that there are so many bugs, I don't trust it to give me reliable information and have to double or triple check everything.

19. Not all of the charge code information is given for non federal aid projects / maintenance projects. Many times only the WBS Element is shown - I need to have Cost Center, Fund, and Functional Area as well.

20. Show expenditure breakdowns for PE, R/W, utility relocations, construction, and CE&I

21. I need to learn how to use the advanced report functions.

22. Have more information about environmental and R/W (permits required and dates, tracts needed and status)

23. It should have clearer general information, including Project ID's, federal project numbers, sceis charge codes, etc. General information to fill out a PPR should be easily found.

24. We need a better report to go over the primary meetings. A report that covers, PE design, ROW - tracts acquired, NEPA status, and permit status

25. It would be helpful to access the proposal for older contracts. I was looking for a proposal for a contract let in 2008 today and really struggled to find it in any application.

26. Would be helpful to our needs if RCE info could be input in a more timely manner.

27. Include LPA jobs

28. Make sure all roads are listed that are in the projects

29. Show TOTAL sum of expenditures for each phase on the phase tab.

30. Needs to have correct amounts in it money wise. I just went into one and I have made $311,772.02 in Utility Payments yet it isn't showing any of them. So it shows 785,630.99 as the balance open and that can't be correct. Project 032523 Utility Agreement No. 12759 (has been closed) on RWDMS. The payments shown on RWDMS are correct but that balance on P2S can't be correct.

31. To many people changing stuff in P2S that doesn't need to be changed. Most of time it is obligation management.

32. When providing a link to ITMS, it doesn't actually go to the road in ITMS - just the application. It would be GREAT if it actually linked to the road segment itself.

33. Making the pay item report more easily transferable into a excel file

34. Communication.

35. Customizable dashboard for each user. Dashboard displays selected projects/contracts and key information easily. Ability to drill down to data then back out.

36. We have lost the ability to view RW status information that could be viewed in PPMS.

37. I used PPMS about once a week or every other week but haven't used PS2 yet.

38. Its Great!

Q10 Export ▾

Please provide any other feedback regarding the P2S application, implementation, documentation and/or training that you would like us to know.

Answered: 16 Skipped: 84

1. More training
2. need more classroom training.
3. So far it appears to be a great program. However, I have found that the only way to really feel comfortable with the program is hands on experience. Unfortuantely that takes time and some growing pains.
4. For training purposes, I think that it would be more effective if the participants could have an example of a "situation" and to be able to work through it themselves. Having "hands-on" is more beneficial and rewarding for me.
5. Please set up training ASAP. We handle on average anywhere from 1000-2500 entries a month that we send to accounting. Want to make sure we're sending correct information.
6. The user interface is very easy to understand.
7. Schedule training for using P2S in the districts.
8. It seems to have been pushed out to production before the bugs were worked out of the program. Also, it seems that the new web based CBES program and P2S were developed separately without a lot of collaboration. Once we find all or most of the bugs and they are corrected, there needs to be a new, very detailed, user manual written and in-depth training offered.
9. Lynsee Gibson did a great job with the class and providing follow-up assistance.
10. Primavera and P2S seem to not communicate very well, this needs to be improved. Schedules are not being made as new projects are started in P2S. This is not efficient
11. Good job....keep it up.
12. I think the program is working great and I'm so glad we eliminated the use of PPMS.
13. Need better "Primary Meeting" report that catches all projects planned and programmed projects, as well as c-projects and regular projects.